



A Weekly Journal of Pharmacy and the Drug-trade.
ESTABLISHED 1859.

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CONTENTS: Vol. LX. No. 8 (Series No. 1,152.)

	PAGE		PAGE
Bankruptcies and Failures	298	Gazette	299
Business Changes	302	Hints and Verses	303
Chemical Society	310	Irish News	289
Coming Events	326	Legal Reports	295
Corner for Students	286	My Apprenticeship	293
Correspondence	316	New Companies and Com- pany News	299
Deaths	302	Observations and Reflec- tions	305
Deed of Arrangement	299	Personalities	301
Doctoring the Poor	321	Recent Wills	301
East Indian News	292	Scientific Progress	304
Editorial Comments:—		Scotch News	290
Early-closing	306	South African News	292
Lagos Pharmacy Law	307	Things that Happen — Sometimes	304
The New Patents Bill	308	Trade-marks Applied for	302
Notes	308	Trade Notes	302
Elementary Dispensing		Trade Report	322
Practice	303	Westminster Wisdom	300
English News	298	Winter Session	311
Festivities	315		
French News	291		

EXPORT TRADE.

THE Publisher of the C. & D. has compiled some striking figures about the exports of British-manufactured goods by the drug and allied trades during 1901. He shows that the values were as follows:—

	£
Aërated waters	145,397
Brushware	155,281
Candles	432,707
Chemicals and chemical and medicinal preparations... ..	8,942,109
Confectionery, jams, vinegar, and sauces ...	1,539,674
Glass bottles	440,710
Indiarubber-manufactures	1,086,841
Paints and materials... ..	2,009,572
Salt	509,769
Seed oil... ..	1,157,574
Soap	999,420

These do not include perfumery, varnishes, and other druggists' goods not separately enumerated, nor 3,885,242*l.* worth of colonial and foreign produce of kindred character also exported in 1901. This is in connection with the Merchant Shippers' Issue of THE CHEMIST AND DRUGGIST on March 8. We strongly advise all dealers and manufacturers of these classes of goods to insert announcements of them in the Issue. Instructions as to announcements should be sent as early as possible to The Publisher of THE CHEMIST AND DRUGGIST, 42 Cannon Street, London, E.C.

Summary.

§ THE PATENTS BILL is summarised in a note on p. 308.

THE DEAL MAGISTRATES have held that heeswax is not a drug (p. 298). *W.:-*

SIR WM. LENG, of Sheffield, who died on Wednesday, was eleven years in the drug-trade (p. 302).

LORD AVEBURY's Early-closing Bill has been defeated in the House of Lords (p. 301 and p. 306).

FURTHER PARTICULARS of the new Lagos Pharmacy Law are given on p. 307. The Poisons Schedule is good.

RESULTS OF TREATMENT with antidiphtheric serum are graphically presented by Mr. Maben in a paper on p. 313.

THE MEDICINAL PLANTS cultivated in this country are described with many interesting features, by Mr. Francis Ransom (p. 311).

MR. G. D. BEGGS, President of the Pharmaceutical Society of Ireland, writes entertainingly about his apprenticeship on p. 293.

NEW FACTS regarding oil of rue, a reaction for nitrates, sugar-estimation, corydalis alkaloids, and beeswax-adulteration are noted on p. 304.

THE EDINBURGH HIGH COURT has decided that the Registrar of the Pharmaceutical Society has power to prosecute under Section 17 (p. 300).

THE SACCHARIN CORPORATION (LIMITED) have again maintained the validity of their patents, a Mr. Dawson being the unsuccessful defendant (p. 296).

A DULL TONE prevailed at Thursday's drug-auctions. Cardamoms, buchu, ipecacuanha were cheaper, and benzoin and beeswax were dearer (p. 324).

THE validity of an agreement restraining a chemist's assistant has been sustained by Mr. Needham, the employer, in the High Court of Justice (p. 296).

THE I. R. INSPECTORS have been in Devonshire buying un-stamped proprietaries (p. 288). A number of interesting P.M. questions are answered on p. 318.

THE BEST POLITICAL NAVY, according to Lord Rosebery, is Mr. Edward Evans, jun. Our artist and poet find this a fitting subject for pencil and pen (p. 306).

THE C. D. A. is working hard before the Bow Street magistrate to show that methylated liniment at 2*d.* an oz. is not sold to the prejudice of the purchaser (p. 298).

OUR METHYLATED-LINIMENTS ARTICLE has brought interesting letters from Messrs. D. B. Dott, Hearon, Squire, & Francis (Limited), and E. J. Millard (p. 316).

XRAYSER'S SUBJECTS this week are Mr. Walter Hills, Licorine, Methylated Soap-liniment, Transvaal Pharmacy, the New Calendar, and Mr. Boot's ideal (p. 305).

DRY HYDROGEN AND OXYGEN, when mixed together and heated to 1,000° C., do not explode or combine, so Mr. H. B. Baker proved to the Chemical Society this week (p. 310).

ASA-FETIDA IN TEARS, yet containing only 20 per cent. of alcohol soluble matter, is now on the market. Mr. John C. Umney gives all particulars about it on p. 316.

LAST MONTH'S Students' Coruer "salt" was a mixture of potassium permanganate, sulphate, and chromate. The result is given on p. 286, and the present state of the tournament on p. 287.

MISS MABEL F. STANLEY appears to be the first lady in this country to write a pharmaceutical book. It is reviewed on p. 294; also the new edition of "Quain's Dictionary" and Tilden's "Chemical Philosophy."

THE markets remain inactive, and no important fluctuations have occurred. Quinine is a shade firmer, but very quiet, speculators paying more attention to coffee. Tartaric acid is hardening, but citric acid is dull. Opium remains easy (p. 322).

A MEETING to wind up the affairs of the International Congress of Pharmacy, 1900, has resulted in the remaining funds being devoted to purchasing a souvenir for M. Crinon, and the balance is to be paid over to the Pelletier-Caventou monument fund (p. 291).

J. H. READ (LIMITED) bought the drug-business of Arrowsmith & Wyborn (Limited), carried on by Mr. John Pollard, who took possession again, for reasons which have been the subject of a case before Mr. Justice Buckley, who decided against Mr. Pollard with costs (p. 295).

Corner for Students.

CONDUCTED BY LEONARD DOBBIN, PH.D.

REPORTS.

THE powder distributed to students on January 22 contained 7 parts of potassium permanganate, 2 parts of potassium sulphate, and 1 part of potassium chromate.

The calculated composition of such a mixture is—

K	...	...	...	...	30.3
MnO ₄	...	...	...	...	52.7
SO ₄	...	...	...	...	11.0
CrO ₄	...	...	...	...	6.0
					100.0

The powder was remarkably free from impurities, an exceedingly minute trace of iron being the only one recognisable when a relatively large quantity was submitted to analysis.

Samples of the powder were distributed to sixty-seven students, and thirty-nine reports were submitted for examination.

All our correspondents detected potassium and the permanganic radical as constituents of the powder; nine failed to detect the sulphuric radical, and nineteen failed to detect the chromic radical, but of the latter five reported the presence of chromium as a metallic radical.

This month's exercise furnished a good example of a mixture which, on account of its peculiarity of composition, required to be dealt with by special methods in order that the best results might be obtained with the minimum of trouble. Containing, as it did, a large proportion of potassium permanganate, which, if not reduced, interfered considerably with the analysis if carried out by following the unbending directions of "the chart," it was best to reduce the permanganate as a preliminary to testing either for metallic or acid radicals. Sulphurous acid, added in slight excess, reduced both the permanganate and the chromate, yielding manganous, chromic, and potassium sulphates; and when the excess of sulphurous acid was got rid of by boiling, the solution was ready for examination for metallic radicals in the usual way. Students who proceeded without reducing, got a precipitate containing sulphur on adding hydrogen sulphide, which was somewhat difficult to remove entirely by filtration, and which in nearly every case was assumed, without examination, to consist of sulphur only. Testing for the acid radicals in presence of the permanganate was distinctly unsatisfactory, and gave rise to a number of mistakes. A suitable solution in which to test for sulphate was easily obtained by boiling a little of the powder with concentrated hydrochloric acid, and then diluting with water. This operation reduced the chromate, however, as well as the permanganate, and, besides, yielded a solution which could not be examined for chloride. The halogens were best tested for in a solution reduced by means of sulphurous acid (free from traces of hydrochloric acid) and mixed, prior to adding silver nitrate, with enough nitric acid to prevent the precipitation of silver sulphite. After detecting the presence of chromium many students endeavoured to prove that it originally existed in the powder as chromate, and some ingenuity and skill were displayed in devising satisfactory methods. The best results were obtained by those who reduced the permanganate in neutral solution by heating with alcohol, or in alkaline solution by boiling with Rochelle salt, and then filtering in either case. One student obtained good results by reducing in the cold with sodium sulphite in presence of sodium carbonate, and

filtering. The filtrate had a distinct yellow colour owing to the presence in it of unreduced chromate, which was easily confirmed by suitable tests.

So large a number of students reported the presence of calcium or of magnesium, or of both, that the mixture was examined with particular care for traces of these metals. When a quantity of the powder, equal to that sent out to each of our correspondents, was employed for this purpose, the presence of recognisable traces could not be established. The supposed detection of calcium or of magnesium in mixtures which contain manganese is a very common analytical error, and appears to be due to the fact that the precipitation of manganese as sulphide by means of ammonium hydrosulphide is only complete after some considerable time. As a consequence of this, manganous salt finds its way into the filtrate which is subsequently tested for the barium group and for magnesium, and it there gives rise to the formation of precipitates which mislead. The difficulty may be overcome by boiling this filtrate until the excess of ammonium sulphide is expelled, and then removing any further precipitate by filtration. A small quantity of the filtrate may with advantage be evaporated to dryness, and the residue tested for manganese by the sodium-carbonate and potassium-nitrate bead test before passing on to test for the barium group.

PRIZES.

The First Prize for the best analysis has been awarded to W. MOFFATT, 7A Callerton Place, Newcastle-on-Tyne.

The Second Prize has been awarded to

J. I. AMUNDSEN, 7 Briery Vale Road, Sunderland.

First Prize.—Any scientific book that is published at a price not greatly exceeding half-a-guinea may be taken as a first prize.

Second Prize.—Any scientific book which is sold for about five shillings may be taken as a second prize.

The students to whom prizes are awarded are requested to write at once to the Publisher naming the book or books they select.

MARKS AWARDED FOR ANALYSES.

W. Moffatt (1st prize)	97	W. H., A.-in-M.	77
J. I. Amundsen (2nd prize)	96	A.B.C.	76
Felix Mas	95	Aloes	76
Jegow	94	Edinburgum	76
Algol	93	Ipsa	75
Excelsior	93	Spencoscope	75
Tungsten	93	Cribden	74
Flora McDonald	92	Tanglewood	74
Cymene	92	Glacialine	73
J. H. Williams	88	Angus Scott	72
J. M.	88	Mercury	72
Allyl...	85	J. R. Stott	69
Photo	85	W. Maxwell	68
Earnest	83	Alex. T. Hope	67
S. W. Clark	81	Loo	66
Brassica	80	Kuon	58
Westminster	80	Botany	57
F. W. Caton	79	Tabloid	53
Richardus	79	G. H. Palmer	38

[One report was received which did not bear the name, pseudonym, or address of the sender.]

TO CORRESPONDENTS.

Special Memoranda, suggested by this month's reports:—

1. In the known presence of sulphate, test for oxalate in an acetic-acid solution by adding a saturated solution of calcium sulphate—not calcium chloride.

2. The evolution of a violet vapour when a solid substance is heated with concentrated sulphuric acid is not conclusive proof of the presence of iodine. Vapour of permanganic anhydride, Mn₂O₇, is also violet.

3. Both manganous salts and zinc salts give nearly white precipitates with potassium ferrocyanide in acid solution.

A number of correspondents fell into error through supposing that the test was a characteristic one for zinc salts.

4. Make sure that the solution of sulphurous acid, which is used for reducing-purposes in searching for acid radicals, is free from hydrochloric acid—an impurity which it often contains.

FILIX MAS.—The fact that you obtained a green liquid on treating the aqueous solution of the powder with hydrochloric acid and hydrogen sulphide was not evidence that the chromium was originally present as chromate. A reagent which reduced the permanganate in neutral solution, but did not reduce the chromate, should have been employed.

JEGOW.—Had you reduced the permanganate *completely* by means of sulphurous acid, and then boiled off the excess of the latter before adding hydrogen sulphide, you would have avoided the formation of the precipitate of sulphur and the troublesome filtration which it necessitated.

ALGOL, J. H. WILLIAMS, and Others.—See general remarks respecting the supposed presence of magnesium as an impurity.

TUNGSTEN.—It does not appear from your report that you added ammonium hydrosulphide to the ammonium chloride and ammonia filtrate in order to precipitate any manganese and zinc which it might contain. This important step should not have been omitted.

CYMENE.—The light-coloured precipitate which you mistook for aluminium hydroxide consisted of chromic hydroxide. Remember that chromic hydroxide dissolves in solution of potassium hydroxide just as aluminium hydroxide does, and that the chromium is only completely reprecipitated from the solution after somewhat prolonged boiling.

ALLYL.—Although probably not incorrect, it is not in accordance with ordinary usage to say that evolved oxygen "would burn at the end of the tube," and your meaning is liable to be misunderstood.

PHOTO.—Such a slender report as you have sent this month cannot do justice to your work. Thus you do not prove the absence of aluminium, lithium, or phosphates—to take a few possible constituents, almost at random—and your account of the examination for acid radicals as a whole was of a very superficial character.

S. W. CLARK and MERCURY.—In adding ammonium chloride and ammonia to precipitate the hydroxides of the iron group, you must have omitted to add the latter reagent in excess, otherwise you would not have failed to obtain a precipitate of chromic hydroxide.

BRASSICA.—The white precipitate which you took for zinc ferrocyanide really consisted of manganous ferrocyanide. Remember that both zinc and manganous salts give nearly white precipitates with potassium ferrocyanide in presence of dilute acids.

WESTMINSTER.—If your iron-group hydroxides were fused with sodium carbonate and nitrate on porcelain, the aluminium you found most likely came from the porcelain. The fusion should be carried out on platinum foil.

F. W. CATON.—We have not been able to obtain the red flame which you attributed to the presence of lithium, nor can we explain how you obtained it when using a platinum wire which you describe as clean. You should ascertain whether your solution of potassium ferrocyanide does not give a greenish-blue coloration when mixed with hydrochloric acid alone. Old solutions of ferrocyanide often give this reaction in so marked a manner as to lead to the conclusion that either the acid, or a solution to which the acid has been added, contains iron, when none is really present.

RICHARDUS.—You appear to have omitted to add concentrated sulphuric acid when applying the ferrous-sulphate test for nitrate. Hydrogen sulphide is the best reagent to use in testing an alkaline solution for any zinc which it may contain; potassium ferrocyanide is not an appropriate reagent in such a case.

A. B. C.—Non-formation of a sublimate on heating a substance in a test-tube does not prove the absence of antimony or cadmium, as there are various non-volatile compounds of these metals. You must have made some strange error in the quantitative experiment which led you to conclude that the powder contained much chloride.

ALOES.—The sulphate present was more than a trace, but the precipitate of barium sulphate was not very conspicuous at first, when produced in a solution in which permanganate was still present.

CRIBDEN.—The precipitate you obtained on adding barium hydroxide to eliminate magnesium, and took to be magnesium hydroxide, really consisted of barium sulphate. We are unable to obtain or to explain the reaction for oxalate which you describe.

IPSE.—The bleaching effect upon litmus-paper of the gas evolved on treating the powder with concentrated sulphuric acid was due to ozone or to permanganic anhydride liberated from the permanganate. Note that sodium hydrogen tartrate is a more delicate reagent for potassium than tartaric acid is; but see also Carnot's test for potassium as described in the *Corner* in November last (*C. & D.*, November 30, 1901).

TANGLEWOOD.—Note that the presence of any considerable quantity of acetic acid interferes with the prompt precipitation of silver chromate. You appear to have failed to detect chromate in consequence of overlooking this point. Lead acetate would have been a more suitable reagent to employ.

GLACIALINE.—The iron-group precipitate contained chromic as well as manganous hydroxide. It is unfortunate that you did not say how you examined this precipitate, as it might then have been possible to point out how you failed to detect chromium.

ANGUS SCOTT.—The green flame-coloration, which appears to have given you a good deal of trouble, was due to the manganous chloride present in the solutions which you tested. Moisten any manganous salt with hydrochloric acid, and test the mixture on a platinum wire in the Bunsen flame. The precipitate you took for calcium tartrate consisted of calcium sulphate. The white precipitate you obtained with silver nitrate in testing for acid radicals was most likely due to the presence of hydrochloric acid in the hydrogen-peroxide solution which you employed to decolorise the permanganate.

JAMES R. STOTT.—The violet vapour evolved when the powder was gently warmed with concentrated sulphuric acid was due to the volatilisation of some permanganic anhydride. In testing for "sulphur in any form," the powder should have been fused with sodium carbonate and some form of carbon free from sulphur, and the resulting mass tested for sulphide by means of a silver coin; or the fusion should have been made with sodium carbonate and potassium nitrate, and the mass then tested for sulphate.

W. MAXWELL.—The fact that silver nitrate gave almost no precipitate in the original solution after reduction with sulphurous acid and boiling (it really gave no precipitate when a solution of sulphurous acid free from hydrochloric acid was used) proved the absence of any considerable quantity of iodide. You will find several reagents mentioned in the general remarks, which reduce permanganate without reducing any chromate that may accompany it.

ALEX. T. HOPE.—You appear to have tested for chromate by adding lead acetate to a solution obtained by reducing the original substance by means of sulphurous acid. This was not correct analytical practice, as any chromate originally present would have been reduced to chromic sulphate; besides, the sulphate formed, as well as that originally present, would yield a white precipitate of lead sulphate.

LOO.—Sulphate should have been tested for in a portion of the original solution reduced by means of a reagent which did not contain sulphur; hydrogen sulphide was not a suitable reagent to employ in such a case as the present one.

G. H. PALMER.—It is almost impossible to estimate the value of your work from such a very fragmentary account of it as you sent. Send a detailed report next time.

PROGRESS OF THE TOURNAMENT.

THIS month's exercise is the fourth of the six exercises of the Analytical Tournament, and the state of the competition is very interesting on account of the close contest for the top positions. In submitting below the marks gained, so far, by the ten competitors who stand highest on the list of those who have sent in reports each month, we venture to express the hope that all of the ten will do their best, in the two remaining heats, to improve upon their highest records hitherto.

Jegow	...	...	385	Westminster	...	...	321
Algol	...	...	377	Cymene	...	...	305
Tungsten	...	...	372	Tanglewood	...	...	301
Edinburgh	...	...	347	Aloes	...	...	288
W. H., A-in-M.	...	...	340	Glacialine	...	...	283

"PHARMACEUTICAL TESTING" is just the thing for the busy pharmacist. Practical, concise, and easy of reference, it gives him the test by which he may ascertain the purity of most of the leading chemical preparations, &c., the quality of which it is his business to know.—Professor W. M. SEABY, of the College of Pharmacy, San Francisco. (Published by the *C. & D.*, 2s. 6d.; by post, 2s. 9d.)

English News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Brevities.

Cotterill, the brewer's engineer who poisoned a vat of beer with red lead at Manchester, has been fined 17. and 5*l.* damages.

The "Pharmacological Notes" in the *Lancet* of February 15 were "On Some Unsolved Problems as to the Chemistry of Drugs," the B.P.C. list being specially referred to.

Mr. Arthur Angell has been re-appointed public analyst to the Hants County Council, and Dr. Bernard Dyer as the district analyst under the Fertilisers and Feeding-stuffs Act.

Colonel T. Davies Sewell announces that the next examination for the diploma of the Spectacle-makers' Company will be held on June 4, 5, and 6, at the Carpenters' Hall, London Wall, E.C.

At Marylebone Police Court on February 18, a carpenter named Leaver was bound over on a charge of stealing a fancy tin box containing Epsom salts, value 4*d.*, belonging to a lady in North Kensington.

At the Manchester City Police Court on February 18, Edward Blackburn was sent to the Sessions for trial on a charge of obtaining 30*s.* by "ringing the changes" at the Oldham District branch of Boots (Limited).

At the Hants Assizes last week, Joshua Luke Durbin, dispenser to Dr. John Kyffin, of Gosport, was sentenced to six weeks' imprisonment for stealing sums of money amounting to 3*l.* 9*s.*, the property of his employer.

At the Central Criminal Court on February 14, George Crocker, chemist, of Brixton, pleaded guilty to having published a defamatory libel on a stockbroker named Eaton. Defendant withdrew the charges and agreed to pay costs, and was bound over to come up for sentence if called upon.

Mr. A. Angell, analyst to the Hampshire County Council, reporting upon the analyses made during the last quarter of 1901, said the percentage of adulteration was 3.2. The number of samples taken was 153; the number of samples adulterated, five—viz., two of milk, one of whisky, and two of butter.

The magisterial inquiry into the charges of fraud preferred against the directors and others connected with the "Patent Novelties Company (Limited)" concluded in Manchester on February 14, after occupying the Stipendiary Magistrate for thirty days. One of the defendants, Mounham, was discharged, and the others were committed for trial.

Henry Heath, of Lydd, wrote to Mr. W. Martin, Southampton, on February 12 for five dozen apiol and steel pills, which he did not get. Subscribers should note that Heath's orders are on postcards headed "You may send to Lydd Station"; and those who respond to this invitation have themselves to thank for falling into the trap.

At Kingsbridge on February 15, Jane Barbara Davis was charged with offering packets of lavender for sale from door to door without a licence. She pleaded that at Exeter the police superintendent told her she did not require a licence, and at Torquay she was told that as long as she sold nothing but lavender she did not need a licence. She was discharged.

Mr. A. W. Stokes, public analyst for Paddington, reports that 140 samples had been analysed by him during the quarter ended December 31, 1901. These consisted principally of milk and butter, with coffee, mustard, sago, tapioca, and two of medicated soap. The total number of samples analysed during the year 1901 was 466; but no drugs are mentioned as adulterated.

The Chemists' Opportunity.

At the meeting of the Kendal Board of Guardians on February 15, a report was received from a committee regarding the system of supplying drugs to the workhouse and the Board was recommended to offer the chemists in the town in rotation the right to supply the drugs at 10 per

cent. over wholesale-list prices. It was also suggested that such articles as lint, cotton-wool, vaseline, bandages, extracts of meat, and Sanitas soap should be tendered for in the usual way. The recommendations were adopted.

The Cambridge Public Health Committee reported to the Council this week that a letter had been received from a chemist in the town asking for a share of the orders given by the Corporation for drugs, and that they had resolved that his application be considered when the tradesmen were appointed.

Mr. F. Thurston, pharmaceutical chemist, of the Queen Street Pharmacy, Ipswich, has brought out at a very opportune moment an "Anti-germ" perfume, highly charged with an antiseptic. It has quite a pleasant odour (says our correspondent) and there is no unpleasant suggestion of a disinfectant about it. The article is meeting with much popular favour.

L.C.C. Items.

It was reported by the Parks and Open Spaces Committee that Messrs. Burroughs Wellcome & Co., the lessees of Brockwell Hall and the adjoining ground, were willing to allow the Council to have the use of a strip of land to give further access to Brockwell Park, which will be a great convenience to the public.

At a meeting of the London County Council on February 18 it was reported by the Asylums Committee that they had accepted the following tenders for Horton Asylum:—Messrs. C. J. Hewlett & Sons, for drugs (40 per cent. discount); Messrs. Burgoyne, Burbidges & Co., for druggists' sundries (20 per cent. off).

Birmingham Notes.

The manufacturers of vaccine-lymph are having a good innings at Aston, where 5,000 of Kynoch's workpeople are to be vaccinated.

There are 667 students of chemistry at the Technical School, Suffolk Street. Very few of them are, however, connected with pharmacy.

As the result of a conference between the town authorities and the Guardians, it is thought desirable to establish an outdoor dispensary for dealing specially with phthical cases.

Professor Frankland, professor of chemistry at Birmingham University and former examiner for the Pharmaceutical Society, is to have conferred upon him the honorary degree of LL.D. by St. Andrews University.

The local veterinarians held their annual meeting at the Grand Hotel on Friday last, when Professor Macqueen (London) discoursed upon some defects and diseases of horses' limbs, and their definition and importance.

The kindly interest taken by the chemical-manufacturers of Oldbury in their workmen is evinced by the recent generosity of Messrs. Chance & Hunt and Messrs. Albright & Wilson, who have built and endowed a literary institute costing something over 1,000*l.*

Major-General Phelps, in the *Birmingham Post*, describes coryza in elephants, and relates how he cured an elephant with the following recipe:—Nine tolas of sugar was triturated with 1 tola of camphor, and 1 tola of the mixture given at intervals of half an hour. The cure was speedy and unexpected, and gained the gratitude of the elephant and its mahaut.

Seeing so many announcements of shops to let in the suburbs suitable for chemists, an inspection of three was made, and, unwittingly no doubt, the landlord had formed a very poor estimate of the needs of an up-to-date pharmacy, for in all cases they were apparently overgrown cottages converted, and the shop-room was, as the saying goes, hardly big enough to swing a cat round without grazing its nose. What one could make of such places would depend largely upon the ingenuity of the shopfitter.

On the Warpath.

A raid has lately been made upon the chemists of Plymouth, Devonport, Stonehouse, and district by an official,

presumably from the Inland Revenue Department, Somerset House, with regard to the liability of labels to stamp-duty. In many instances labels hitherto considered by the trade and label-printers as being exempt have now been pronounced liable, and the usual official explanation has been asked for. A few chemists have had four or five labels seized, and it is to be hoped the authorities will considerably minimise the 10*l.* fine for each offence, which they have power to enforce.

An Exeter correspondent also writes: "The Inland Revenue people having been very busy amongst us of late and trapping not a few, I thought it my duty to do my best not to progress again. The I.R. office being shut, I sent to the G.P.O. here for some 1½*d.* P.M. stamps. After a lot of consultation my apprentice was informed that they did not exist! He was told the same tale by other clerks the next day, but was able to get them from a small sub-office. I think it is time that our I.R. officials should instruct the P.O. authorities on their revenue duties if they wish us to stamp our medicines, as there is not a Revenue Office in every town."

Fire.

A lad in the employ of Mr. T. J. A. R. Burbank, chemist and druggist, Oxford, accidentally set fire to an oil-store at the rear of the pharmacy on February 14. The building is of corrugated iron, which prevented the fire from spreading. Two drums of benzoline and one drum of methylated spirit were destroyed, and other goods damaged.

Alleged Fraudulent Trading.

At Manchester Police Court on February 15 a man named Arthur Vickers was charged with obtaining money by false pretences. The Detective-inspector, who apprehended the prisoner at premises in Altrincham Street, off London Road, said the stock-in-trade in the office consisted largely of empty cardboard boxes. There were a mortar, a bag of charcoal, a quantity of material for making razor-paste, samples of paste in tins, which Vickers said was "Roachaline," for killing beetles. There were also samples of teething, headache, and other powders. There were a number of handbills relating to the "Lightning Manufacturing Chemical-company" at Newton Street, Piccadilly, and the Roachaline Company at Rusholme, but he seemed principally to advertise as "Calder Brothers," Britain Street, and the "Novelty Company," Spear Street. He charged the prisoner with obtaining 5*s.* in money from James Tait with intent to defraud. On searching him thirty-eight letters of complaint were found from persons in various parts of the country. James Tait, of Derby, stated that in consequence of correspondence with the Novelty Company he forwarded 10*s.*, but had received no goods up to that morning. A grocer's manager at St. Helens deposed that as the result of forwarding 6*s.* to the "Novelty Company" he had a parcel sent him containing 3 doz. 1*l.* headache-powders, 3 doz. 1*l.* rhubarb-powders, and 1 doz. 6*d.* "lightning chimney-sweepers." He sent most of the "lightning chimney-sweepers" up the chimney, but it was not much better. He considered the "sweepers" valueless. Prisoner was remanded on bail.

The Horse and the Window.

Two large plate-glass windows at the establishment of Boots (Limited) in High Street, Rotherham, were broken on February 14 by a horse backing a cart into them. Considerable havoc was played amongst the stock in the window, and a woman who was looking at the window-show was thrown amongst the broken glass, but escaped injury.

Football.

London College F.C. v. Muter's F.C.—Played at Shepherd's Bush on February 15, and produced a keen struggle, London College proving the winners by four goals to three. London attacked strongly at the start, running up three goals after twenty minutes' play; then Muter's had a turn, and at half-time the score was three to two in favour of London.

The Week's Poisonings.

Only five poisonings are on record since our last report. These were all caused by scheduled poisons. Carbolic acid was taken in two cases, the remaining three being laudanum, chlorodyne, and prussic acid.

Alleged False Pretences.

At Bow Street Police-court on February 19, George Hammond (57), described as a traveller, but who is alleged to be a ticket-of-leave man, was charged, on remand, with obtaining goods by false pretences. The evidence stated that prisoner went to Messrs. Pears' establishment in New Oxford Street, and produced a written order for 4 gross of soap tablets, supposed to have been sent by a firm in Camden Town. He was allowed to take some of the soap away with him, and it was afterwards found that the order was a forgery. The prisoner was further charged with obtaining in the same way half a gross of soap, from the Albion Soap Company, New Oxford Street, and 6 dozen bottles of bovril from Messrs. Petty, Wood & Co., wholesale grocers, Southwark Bridge Road. Whilst being detained at the Kentish Town Police-station, the prisoner attempted to throw into the waiting-room fire a counterfoil relating to the bovril. At Bow Street Detective-sergeant Stephens found on him a cloak-room ticket showing that the prisoner had deposited the bovril at a railway station. The prisoner was committed for trial.

Irish News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Personal.

Dr. J. C. McWalter, M.P.S.I., Dublin, has been elected a life-governor of the Convalescent Home, Stillorgan.

At the annual meeting of the Londonderry Corporation held on January 23, Councillor Donald Neil Stewart, M.P.S.I., pharmaceutical chemist, 98 Duke Street, Londonderry, was unanimously elected a member of the Technical Instruction Committee to represent the chemical and pharmaceutical branch of the department.

The Irish Calendar.

The calendar of the Pharmaceutical Society of Ireland for 1902 has just been issued. It contains all particulars appertaining to official pharmacy in Ireland, with lists of pharmaceutical chemists, chemists and druggists, and registered druggists. Statistics of the Society, and a summary of the accounts, are appended, with copies of the examination-papers set during 1901 at the various examinations. Copies can be had from the Registrar, 67 Lower Mount Street, Dublin. Price 1*s.* 6*d.*

Official Approval.

The Council of the Pharmaceutical Society of Ireland have been informed that the Lord-Lieutenant of Ireland and his Majesty's Privy Council in Ireland approve of the appointment of Mr. Henry O'Connor, M.P.S.I., as an examiner in place of Mr. William Vincent Johnston.

Nationalising Railways.

A conference of the Irish Traders' Association was held last week in Belfast. The question of excessive railway-rates and charges was vigorously discussed, and it was resolved "to start such an agitation as would make it compulsory on the Government to purchase the Irish railways and manage them for the benefit of the country." It was stated that goods could be brought from London to Belfast much cheaper than from Belfast to Clows, a neighbouring town, and that packages could be consigned from Dublin *via* Glasgow to the West of Ireland much cheaper than if sent direct. The average charges per ton on goods in England, Scotland, and Ireland were stated to be 2*s.* 7½*d.*, 2*s.* 3¼*d.*, and 6*s.* 7¼*d.* respectively.

Workhouse-drugs.

The Local Government Board has informed the Belfast Poor-law Guardians that the cost for medicines used in the workhouse is abnormally high, and has been so for some years. The Guardians point out that during the last year they retrenched to the extent of 9,000*l.* in their expenditure. The Infirmary Committee has been asked to investigate the cost of extra drugs, which had gone up from 376*l.* for the

half-year ended September 30, 1899, to 1,014*l.* for the six months just expired. They get no rebate on the outlay for extras. Dr. McDonnell said if the medical men had a free hand in the matter of extras the bills would tell their own tale of saving at the end of the year. The doctors get no encouragement from the Guardians, and as a result the bills are not looked after as they should be.

Oil-barrel Case.

In the Dublin Police Court on February 15 two youths named Warren were charged with the larceny of oil-barrels, the property of Messrs. McMaster, Hodgson & Co., chemists, and Hugh Moore & Alexander, wholesale druggists, the Linen Hall, Dublin. The accused were sent for trial to the city sessions.

A Source of Infection.

Sir Chas. A. Cameron, in a paper in the *British Medical Journal*, gives good reasons for supposing that new clothes may occasionally be a source of infection. The recruits of the Royal Irish Constabulary located in large barracks in Phoenix Park, Dublin, have been particularly liable to scarlet fever, and it has been difficult to account for. It occurred to Sir Charles Cameron that the new clothes supplied to the recruits were the source of infection. These clothes are made for the contractor by women in their own homes. Orders were issued to have all new clothes sterilised, with the result that from May 15, 1901, to January, 1902, no case of scarlet fever has occurred.

Scotch News.

Local newspapers containing marked items of news interesting to the trade are always welcomed by the Editor.

Business Changes.

Mr. A. Weir, chemist and druggist, has just acquired the business of Mr. W. Staver, Selkirk.

Mr. J. R. Douglas, chemist and druggist, has purchased the business carried on for some years in Leith Walk, Edinburgh, under the style of the Edinburgh and Leith Drug Company (Limited).

Chemist and Postmaster.

Mr. Daniel Halley, chemist and druggist, 70 Great Western Road, Aberdeen, who lately acquired the old-established business at 31 Victoria Road, Torry, has now been appointed sub-postmaster of the Victoria Road Post-office. Mr. Halley has had a large business experience, gained throughout Scotland, England, and abroad, and, having been engaged for a number of years in a town sub-office, has an intimate knowledge of all post-office work.

A Hospital Dispute.

The doctors and the managers of Forbes Leanoil Hospital are at loggerheads. It appears from the statement of some of the medical men involved that, in accordance with one of the rules of the institution, the hon. medical officer in charge of the institution will attend all cases admitted "until any of the patients desire to be under the care of their ordinary medical attendants, or of the medical officer who sent them in." This rule, until a few years ago, was interpreted by the secretary and by the medical men generally as meaning that the patient when sent in was to be entirely under the charge of the medical officer. Lately, however, the secretary is said to have advised a medical man not on the hospital staff that he was quite within his rights in attending any of his patients at the hospital. This new interpretation has led to friction, and several medical men have refused entirely to give their services to the hospital until more satisfactory rules are drawn up.

Dundee and the B.P.C.

A meeting of the Conference Local Committee was held on Monday, February 17, when representative members from Dundee and district assembled to make final or tentative arrangements in connection with the meeting of the British Pharmaceutical Conference. It was agreed that the date of opening the Conference meetings be Monday,

August 11, and that the President's address should be given on Tuesday morning as usual. The Treasurer was authorised to call in all outstanding subscriptions, and it was arranged that a deputation should wait upon Lord Provost Hunter to know if it would be agreeable to him to welcome the Conference to Dundee. Several committees were also appointed. On the morning of February 18 a deputation of the committee were introduced to the Lord Provost in the City Chambers by Bailie Doig. Mr. Charles Kerr explained the character of the Conference, and the arrangements which had already been made for holding the ordinary meetings in the University College. His Lordship, in reply, said that it would give Mrs. Hunter and himself much pleasure to entertain the members of the Conference and their friends at a reception and *conversazione*, to be held in the Albert and Victoria Galleries on the evening of August 11. The deputation, after expressing their sense of the great pleasure and gratification which such an arrangement would confer upon them as a body, took their leave.

From Edinburgh.

The will of the late Mr. Thomas Hood, chemist and druggist, Leith (previously in Nairn, and at his death manager of the Edinburgh and Leith Drug Company, Limited), has been proved, the net personalty being 820*l.*

We have now recovered from the effects of our "Great Dinner" (writes a diner), and are preparing for our luncheon on Friday, when the leading lights of pharmacy will be prepared to lay down the law to the University authorities.

Almost simultaneous with the return of Lance-corporal Bowman from the front, after nearly two years' service, Messrs. Smith & Bowman returned to their completely reconstructed pharmacy, which is now one of the best and most handsomely equipped in the district.

Two assistants are just proceeding to "the front," one from Mr. Morrison, Elm Row, and the other from Mr. Wylie, College Street, but whether as combatants or not, we do not know. One of Messrs. Raimes, Clark & Co.'s assistants had passed his shooting and riding tests and medical examination for Fincastle's Horse, when the War Office stopped recruiting. A former apprentice of the same firm went out with the first batch of Scottish Sharpshooters and returned safely, while another, well known in athletic circles, joined the S.A.C. and succumbed to enteric a few months after he landed.

Glasgow Notes.

Rumour has it that for the first time in its history a lady is to be one of the entrants for the Kinninmont prize.

There has been a sudden and serious rise in the daily number of fresh smallpox cases, but there is still no rush for vaccination.

Judging from the brisk business being done at the local schools of pharmacy the new Preliminary has not yet affected the supply of students.

The series of popular lectures now being given at the expense of the Corporation includes one on "The Botanic Gardens" by Professor Bower.

Many local shop-keeping doctors declare that they cannot legally be interfered with by the Medical Council until its recently-advertised warning is sent direct to each registered practitioner.

A man, who is suspected to be an Inland Revenue officer, has been trying to make purchases of S. V. M. from chemists on Sunday. So far the tempter has been foiled by the philosopher of the pestle.

Glasgow chemists are not unduly harassed by the food and drug inspectors, but the latter have lately been taking samples of oil of almonds, olive oil, camphorated oil, sweet spirit of nitre, and eucalyptus oil.

Assistants complain that while wages and the conditions of service have greatly improved all over the country, Glasgow is strangely backward in these respects. Much of the blame is put on the doctors' shops.

The portents are against the immediate realisation of the early-closing movement. The decision of last Friday's meeting of the local Association to consign the report to the

ward and watching of the Council will make for alacrity of action. In the meantime it seems to be the "pious opinion" of two-thirds of Glasgow chemists in business that something should be done.

Messrs. John Mackay & Co., of Edinburgh, Glasgow, and Newcastle, whose largest establishment at Kinning Park, Glasgow, has hitherto been mainly devoted to the production of aerated waters, are about to make a bid for a bigger share of the drug trade in the West of Scotland. Mr. Alexander Napier, an experienced drug traveller, has been appointed resident representative in Glasgow.

French News.

(From our Paris Correspondent.)

SUDDEN DEATH OF "DOODICA."—One of the Siamese twins operated upon by Dr. Doyen on Sunday, February 9, died last Sunday from convulsions.

THE TREATMENT OF TUBERCULOSIS.—Drs. Robin and Binet are inviting medical men to visit their laboratory at the Hôpital de la Pitié for the purpose of studying their method of treating consumptive patients. The method consists in reducing the combustion of the tissues due to the over-inhalation of oxygen. Patients whose lungs are abnormally active through over-exercise or overwork are ordered complete repose, to keep their bodies warm, and breathe fresh air. Drinkers are ordered to give up spirits in every form. Consumptive patients from hereditary causes are ordered cod-liver oil, and to avoid over-exertion and tonics and stimulants of every sort. Mountain and sea air is also prohibited in certain cases as being too exciting.

POISONING BY TINNED MEATS.—In the course of an inquiry into the causes of poisoning by tinned meats and the means of preventing it, Dr. Brouardel, President of the Committee of Public Health of France, has addressed a report to the Minister of War, in which he states that accidents of this kind may arise from the introduction into the digestive-organs of poisons formed in advance in the tinned food, or by a process of microbic infection. He says that most tinned meats, in fact, an average of 70 per cent., contain living germs, which is apparently due to the fact that processes of sterilisation in use in industry are very uncertain. The report also contains details of the best measures to take for rendering such meat suitable as an article of food.

VAN'T HOFF AND WURTZ.—It may not be generally known that Professor van 't Hoff, the recent winner of the Nobel Prize of 8,000*l.* for chemistry, began his scientific career in Paris. It appears that in 1868 Jacob Heury van 't Hoff, then a lad of sixteen, entered the laboratory of Wurtz, the famous French chemist. The "Dutch Berthelot," is a native of Rotterdam, and took his D.Sc. at Utrecht University in 1874, but now professor at Berlin:—A curious calculation was made regarding Wurtz by one of his pupils of a mathematical turn of mind. The professor restlessly paced the platform while he delivered his chemistry lectures. At four miles an hour, during the thirty-five years he occupied the chair, he walked about twelve thousand miles, a very respectable pedestrian feat for a chemistry professor!

CACODYLIC MEDICATION.—At the meeting of the Paris Academy of Sciences last Monday, M. Arnaud Gautier communicated some new results obtained with cacodylic medication. In general the cacodylates have proved efficacious in the treatment of consumptives, but in addition these medicaments have a very pronounced antiseptic action. This latter virtue seems duly established by recent experiments made by a French army surgeon, Dr. Billiet, in the treatment of malarial fevers. Patients who had resisted treatment by quinine for five months have been cured, reports the doctor, in about ten days by small doses of methylarsenate of soda administered either by the stomach or subcutaneously. It is claimed that not only is this substance more active and the cure more rapid than with quinine, but that it acts as a tonic, instead of debilitating as quinine does.

TRAGIC DEATH OF A PHARMACIST.—Last week Pierre Kœkly, the son of a retired pharmacist, killed his father, who was 71 years of age, by the discharge of a gun—accidentally, it is supposed. The unfortunate incident occurred at a little place called Vézélise, Vosges. It appears that the son's mental faculties are rather wanting, and as a child he had a badly balanced character, at the same time being very intelligent. In fact, he was reckoned one of the best students at the Nancy Faculty of Sciences, where he worked for some time. Later he studied chemistry in Germany, and travelled in the far East, where he contracted the opium-habit. His attitude since the tragic event has given rise to the supposition that he is not responsible for his actions, and he has consequently been put under observation in an asylum. It is reported that some years ago he caused the death of a sister, aged 18, by filling her bedroom with deleterious gases. He also pushed a cousin off an embankment, causing him to break both his legs. At that time he was put under restraint, but appeared to have recovered.

THE UNIVERSITY OF PARIS.—One of the subjects discussed by the International Congress of Superior Instruction held here during the Exhibition of 1900 was the best measures to be adopted for attracting more foreign students to Paris. The Council of the University has decided recently that the programme of the four Faculties and the Superior School of Pharmacy is to be issued early in April next in order that foreign students may be early informed of the subjects to be treated by the professors during the 1902-1903 session, and measures will be adopted for distributing the new programme, which was formerly not issued until October of each year. At the annual meeting for 1902, M. Guignard, Director of the Paris School of Pharmacy, was nominated Vice-President of the Council of the University for the current year. In the annual report of the work of the University it was shown that at the end of last year there were 245 professors attached to it, of which 17 belong to the School of Pharmacy. During 1901 there were, in all, 13,469 students inscribed at the Paris University. Of these, pharmacy accounted for 1,742, only 16 being foreigners, and 5 of those were Turks.

THE INTERNATIONAL PHARMACEUTICAL CONGRESS.—The members of the organising committee of this congress met recently for the purpose of finally winding up the affairs of the Congress, and to take a decision regarding the cash balance remaining in hand. M. Petit presided at the meeting, and the leading members of the committee residing in Paris were also present, including MM. Marty, Barillé, Crinon, Labélouye, Léger, Leidié, and de Mazières. The Treasurer, M. Labélouye, presented a cash statement showing a balance of 2,266*fr.* in hand. The accounts were duly passed, and the President asked for suggestions regarding the disposal of the balance. M. Langrand proposed that it should be handed to the Committee of the French Pharmacy Conference held in 1898, who have the task of taking charge of the interests of pharmacists in the proposed new pharmacy law, and of getting it through Parliament. Several members present mentioned that amounts paid to the Congress were in almost all cases paid with the distinct object of assisting an essentially international movement amongst pharmacists, and consequently the committee would be scarcely justified in disposing of the funds in favour of an exclusively French work, however interesting it might prove. M. Langrand having withdrawn his motion, M. Marty proposed that a sum, to be decided on, should be devoted to the purchase of a souvenir for M. Crinon, the Hon. Secretary of the International Congress of Pharmacy, "in recognition of his activity and devotion." He further proposed that the balance should be paid over to the fund for defraying the cost of the Pelletier and Caventou monument. Both these proposals were adopted by unanimity. It was further decided that all the documents relative to the International Congress of Pharmacy of 1900 shall be lodged in the archives of the Chambre Syndicale des Pharmaciens de la Seine, 5 rue des Grands Augustins, Paris.

FOR VETERINARIANS.—A mysterious illness is decimating the horses in the Province of Veroua. The stricken horse suddenly becomes furious, biting and knocking its head against any obstacle, whilst the hind parts remain paralysed. The horse dies in from twelve to forty-eight hours.

South African News.

PERSONAL.—Mr. H. T. Doble, Ph.C., of Kingwilliamstown, Cape Colony, son of Mr. H. T. Doble, chemist, Tavistock, has recently obtained the diplomas of M.R.C.S.Eag. and L.R.C.P.Lond.

THE NATAL GOVERNMENT have accepted the tender of Lennon (Limited) for a supply of medicines, drngs, &c., to the various Government departments in Dnrban for the ensuing six months.

NEW CHEMISTS.—The following have received licences to practise as chemists and druggists in the Cape Colony:—Harry Richards (British diploma 1888); Albert Nicolson (British diploma 1897).

A BOTTLE EXCHANGE has been formed by the Mineral Water Manufacturers of the Cape peninsula. Apart from seeing that empties reach their respective owners, the Association has power to prosecute persons infringing the rights of its members.

NO TYPEWRITING.—The recent Government notice prohibiting the acceptance of typewritten documents at the Deeds Office, Cape Colony, has not had a very kind reception. It would appear that the Cape Government got the idea from the Transvaal, where, in the olden days, duplicates in carbon were accepted, and it is these carbon copies that have become illegible with age. Had the Government insisted on all documents and copies being done direct from the machine, the difficulty would have been overcome.

POISONED BULLETS.—The recently issued report of Mr. Juritz, the Cape Government analyst, deals with the much-debated question of the alleged coating of Mauser bullets with verdigris by the Boers in the earlier stages of the war. Mr. Juritz states that he has examined bullets sent to him and has come to the conclusion that the green coating is not acetate of copper. Assuming that there is danger of blood-poisoning, the chief analyst inclines to the belief that there is quite as much danger from the employment of dirty or contaminated wax-coating as from the copper compounds with which the wax may have been mixed.

INVESTIGATION NEEDED.—A wounded soldier recently returned from the front was discovered in a small room at Woodstock, near Cape Town, together with his wife and two children, one of whom was suffering from diphtheria, and has since died. They were quite destitute. The woman stated that she had applied for assistance to the Somerset Hospital; also to medical men, but failed in her object. It is alleged that one medical man called, but on learning that the family were without money refused to attend or give a prescription. The local Municipal Authorities are making inquiries in the matter.

BUSINESS CHANGES.—Messrs. Cameron & Hamilton, of Cape Town, will open a drug-store at Observatory Road as soon as the necessary alterations can be made in the premises which they have acquired there. This will make their third establishment in the Cape peninsula.—Messrs. Heynes, Mathew & Co., inform us that they will take over the concern hitherto carried on under the style of J. T. Pocock & Co., as from February 1, and in future communications, &c., having reference to that business, should be addressed to them at their head-offices, Cape Town. The business thus acquired is one of the oldest at the Cape, being established in 1836.

PATENTS AND TRADE-MARKS.—Amongst the applications for letters patent this week is one for "a liquid egg-preserved," by Alfred James Davis, importer, of Cape Town, and one for "improvements in explosives," by Charles Frederick Brown, clerk, of Cape Town.—The following is among the applications to record trade-marks in the Cape Colony: A pictorial label, the same as that used on Scrubb's ammonia, by Messrs. Scrubb & Co., in respect of cleaning and toilet compounds in Classes 47 and 48.—Messrs. Brunner, Mond & Co. (Limited), alkali-manufacturers, announce their intention of applying to the Cape Town authorities to be registered as the proprietors of the trade-mark "Empire soda."—Mr. William David Eustace Watkeys, as agent for Mr. John Millar Cunningham, of Cape Town, has applied to the authorities at Bloemfontein, Orange River Colony, for registration of the trade-mark "Erbaisha," in connection with patent medicines.

SEVERAL NARROW ESCAPES.—A fire broke out in a

photographic studio in the vicinity of Messrs. J. T. Pocock & Co.'s premises in Cape Town on January 22. Thanks to the prompt arrival of the brigade the flames were confined to the scene of the outbreak, and, with the exception of damage to an outhouse, the drug firm in no ways suffered.—Next evening a large ironmongery and general stores caught alight, and was completely gutted. A violent south-easter was blowing at the time, and at first it was thought that the whole corner would have to go, but the fire brigade managed to protect it; the homoeopathic pharmacy next door would have been involved.—Yet another fire occurred in Cape Town on January 25, this time in another part of the town. The premises were occupied by Mr. A. John Oke, and Mr. F. Ingram, a soft goods importer and painter and decorator respectively. Both these gentlemen a few years since severed their connection with the drug-trade to take up their present pursuits.

East Indian News.

A "BEECHAM" FAMINE.—"We have for the past ten days been without a box of Beecham's pills," writes a Bombay correspondent; "and, as things go, this state of affairs is likely to remain with us for some time to come."

TELEGRAPHIC RATES TO INDIA.—The Eastern Telegraph Company announces a reduction in the tariff for telegrams to India, Ceylon and Burmah. Hitherto the rate has been 4s. per word, but on and after March 1 next the tariff will be reduced to 2s. 6d.

REWARDED.—Messrs. N. Powell & Co., chemists and surgical-instrument makers, Dnnan Road, Byculla, Bombay, have been awarded a gold medal at the Indian Industrial Exhibition held at Calcutta in December for the aseptic surgical instruments and trusses made by them.

GENERATORS FOR SODA-WATER DUTY FREE.—The India Office have issued a Customs circular containing a decision to the effect that generators for making soda-water, which are worked by steam-power and are not adapted for working by manual or animal power, are exempt from duty.

CHEMIST AND FIREMAN.—Carbonic-acid gas has been successfully employed at Madras for extinguishing a fire in the hold of a steamer laden with jute. The carbonic acid was supplied by Messrs. Maclure & Co., chemists, Mount Road, and six cylinders, each containing 84 lbs. of liquid CO₂, were used with marked effect.

RINDERPEST TREATMENT.—Considerably more attention is to be paid by the Civil Veterinary Department of India to the inoculation of cattle for rinderpest, and arrangements are being made under which the Mukhtesar Laboratory will double its annual outturn of serum for inoculation purposes. This will provide treatment for 100,000 cattle.

PEPPER CULTIVATION IN MADRAS.—According to the annual report of the Wynaad Planters' Association, the cultivation of pepper in the Madras Presidency has been increasing largely during the past few years, and is paying handsome dividends; but unfortunately with the increase of the industry came the inevitable increase of theft. A disease which has shown itself for some time past among the pepper vines, has increased somewhat seriously during the year.

THE EARTH NUT CROP.—In Madras there has been a marked recovery in the area sown with ground-nut from the depression of recent years. In South Arcot the area reported far exceeds that of any previous year and is nearly three times the average of recent years. The recovery is chiefly attributable to the favourable character of the sowing season, but is also assigned to the introduction of a new variety. The export trade in earthnuts in recent years fell to a very low level, in consequence of bad seasons and the deterioration of seed; but with the introduction of a new variety and a return of good seasons in Madras, where the crop is most largely grown, the trade seems to be approximating to the dimensions it attained before the period of depression set in. The season's crop at Pondicherry has also been a bumper one, and it is expected that a million and a half bags will be available for exportation to Marseilles in the course of the current year, which means that the crop is likely to furnish occupation to all those connected with, or interested in, the nut trade until the next crop is due in October or November.

My Apprenticeship.

In Ireland.

LET me confess to begin with, that my present profession was not my first love, as previous to my entering on the thorny road of pharmacy I had the intention of following the desires of my early youth—viz., of becoming an artist, having shown some fair ability in that line. I would never tire of working at the easel. However, having a father with a very practical turn of mind, and he having, I suppose, the almost universal idea of the chemists' elevenpence-halfpenny profit



MR. G. D. BEGGS, Pres. P.S.I.

on the shilling, induced me to look with some favour to that particular business, and having had a small smattering of the school chemistry, I accordingly delighted his heart by consenting to enter the ranks of pharmacy. At that time we had no pharmaceutical diploma. So after looking about several of the retail houses in the city (Dublin) I was finally advised to go into one of the manufacturing houses. Accordingly my father made overtures to one of the oldest and best known houses in the trade, Messrs. Boilean & Boyd (established 1700), and they having a vacancy, preliminaries were arranged such as premium, &c., which I may here mention was 100%, serving five years free, for which I was to be taught the art and mysteries of a chemist. The eventful morning arrived when I was to commence my career, and right well do I remember my feelings when I was introduced to the head of the firm, Mr. John George Boilean (who, I might mention, was a perfect martinet); in fear and trembling I listened to his reading my indentures, he laying particular stress on the several things I was not to do. This ordeal having concluded, I was handed over to the tender mercies of one of the junior office hands, and then and there I commenced my career as a chemist and druggist. There was a certain routine that the apprentices had to go through, the first duty being to call at the various steamer wharfs along the river to collect and pay the freights on all the incoming goods. This to my mind was not a bad sort of job to commence with, but after a little time I began to think that there was not much of chemistry in it, and accordingly I mildly remonstrated, but was very promptly informed that I would have to do as others before me had done. My next move was indoors to one of the departments where boxed goods and castor oil, pomades, &c., were put up, and here I may say I first learned how neatly things could be done. Having shown some aptitude for wrapping up parcels neatly (I find most of the assistants of the present day either cannot or will not take the trouble to turn out neatly wrapped parcels), after a time I was transferred to another department called the wholesale country. Here I was made conversant with the appearance of the various drugs and chemicals, and profited considerably; but still the goal of my ambition seemed to be far off, which was to be placed in the laboratory. From this

department I was moved to the town wholesale, the work of which was very similar to that of the country. I might here mention that our firm had several contracts for fine drugs and chemicals from the Cochin Government, from Canada, Vancouver Island, &c. The several articles had to be very carefully put up, and these orders were generally done after hours; I was usually given the execution of these. Each article ordered had to be put up thus; 14 lbs. of a drug in fourteen 1-lb. bottles, which had to be first luted with a certain compound when melted, then capped down with gutskin, and finally covered with white capping-skin. I remember with what feelings I used to admire the multitude of articles on the counter each morning after my night's work. On my fourth year I got elevated to the retail, under the charge of one of the best retail hands in our city, Mr. Robert Ramsay. I took kindly to this branch, and after some time was given charge of it, but I still had the laboratory in view. It was in the fifth year that I was transferred to the laboratory and placed under the charge of our head chemist, Mr. Thomas Henry Redding. This was the goal of my wishes, and right well do I remember my first day's experience. Being, like Zaccheus, small of stature, I was placed on a box in front of one of the large steam pans, and directed to keep stirring the contents. What with the smell and the constant stirring, I, at the end of the day, had slight misgivings as to the laboratory pleasures. However, I was told after a few days at this sort of work I would get something of a lighter character to do, and accordingly I was placed in front of a large stone mortar, with pestle suspended or held in position by an iron ring from the wall, and by the time the day was over I had come to the conclusion that I would prefer the stirring. After some time I had work more to my taste, such as making magnes. cit. eff., ung. hyd. nit., ether. snph. and all other compounds and chemicals that we manufactured. After some time I had temporary charge. On the completion of my time the firm presented me with a testimonial in the form of a gold watch and chain as a mark of their esteem. I continued with the firm as town representative for some seven or eight years, then left to embark in my present business. The firm not having a compounding department was a great loss to me, as I had to turn in after my day's work to one or two of the Dublin houses to learn this branch. During my apprenticeship I had to do rough and dirty work, still I look back with much pleasure on those days, and can generally say that it was my own fault if I did not learn the usual work of the chemist and druggist of the day.

THINGS WORTH KNOWING.

Vermicelli, if good, does not curdle milk.

Not a single infectious disease is known in Greenland.

Salt does not cake or deliquesce if mixed with a little arrowroot.

After peeling apples, dropping them into cold water prevents them becoming discoloured.

Cocoon oil and potassium iodide do not develop free iodine so readily as other fatty bases.

To rid ships of rats, burning sulphur below decks has been shown to be effectual, the hatches being battened down.

A smoky lamp may be cured by soaking the wick in strong vinegar or B.P. acetic acid, and thoroughly drying before use. It ensures a bright and clear light.

A pint of powdered wood-charcoal put in a small cotton bag and then into a barrel of new cider will prevent fermentation, and the longer such cider is kept the more palatable it will become.

Ammonia carbonate rubbed upon a hot wet spade in a greenhouse has a miraculous effect in developing a profusion of flowers, buds, and leaves. The tints are said to deepen and increase in brilliancy after each application.

Reviews.

Introduction to the Study of Chemical Philosophy: the Principles of Theoretical and Systematic Chemistry. By WILLIAM A. TILDEN, F.R.S. $7\frac{1}{4} \times 4\frac{3}{4}$. Pp. x+366. 5s. (With Answers to Problems, 5s. 6d.) London, 1901: Longmans, Green & Co.

THIS is one of the very few English books which attempt to introduce the student of elementary chemistry to the purely theoretical aspect of the subject. The statement made in the preface to this "completely revised and rearranged" edition that, as a consequence of the influence of new doctrines and the attendant modified phraseology, "the book has been completely recast, and in large part rewritten," led to the expectation that the new theoretical developments in chemistry would be accorded a prominent place in it. In our opinion the occasion of the preparation of this new edition furnished Professor Tilden with a great opportunity for furthering the advancement of the new theories respecting solution, electrolysis, chemical equilibrium, &c., which opportunity we regretfully find that he has failed adequately to embrace. The new views regarding some of these subjects are certainly dealt with, but instead of being brought before the student gradually and almost from the very outset, as of fundamental importance in the development of much of the subject-matter of the book, they take a quite subordinate position near the end; and we are unable to get rid of the impression that they are advanced not in that whole-hearted manner which implies conviction as to their validity, but rather as a more or less grudging concession to a prevailing fashion. To simply state that, for example, the headings "chemical equilibrium," "phase rule," and "transition point" do not occur in the index is to indicate to the student of the recent theories in chemistry that the treatment of the subject is not up to date. As regards some of the older matters with which the book deals, we think that the pruning-knife might with advantage have been much more freely applied than has been done. Thus it is difficult to appreciate how the author can suppose that something, chemically speaking, really worth doing has been accomplished when a graphic formula for crystallised zinc sulphate has been written (showing tetrad oxygen throughout, water of crystallisation included). Again, he states that the hypothesis originated by Van 't Hoff (not "Van t'Hoff," as on page 124 and in the index) regarding stereoisomerism "is now universally adopted," while four pages earlier he represents methyl isocyanide by the formula $C \equiv N - CH_3$. It would be interesting to know what is Professor Tilden's notion of a space formula for methyl isocyanide, in which the nitrogen atom is symmetrically disposed with respect to a carbon atom (not the one of the CH_3 group), which conforms with the requirements of Van 't Hoff's conception. Despite the beauty of the series of formulæ in which it occurs, the incorrect formula, N_2O_5 , should now have been finally omitted from amongst those for the oxides of nitrogen. There is a very frequent looseness of style in the book which grates upon the initiated reader. For instance, on page 71 we read that

the bulk of one part by weight of hydrogen is regarded as the volume of the atom of that element, and is selected as the unit for comparison of other volumes, atomic and molecular. Twice this bulk of hydrogen contains a molecule, and all molecules in the gaseous state occupy the same volume.

This can scarcely be regarded as either happily or accurately put, and it may easily mislead the uninitiated student. Notwithstanding the defects to which we have referred there is much that is valuable and suggestive in the book. We believe that Professor Tilden could thoroughly modernise its teaching without much difficulty, and to the very great advantage of its readers.

A Manual for Assistants' Examination, Apothecaries' Hall. By MABEL F. STANLEY. $6\frac{1}{2} \times 4\frac{1}{2} \times \frac{1}{2}$. Pp. 281. London: H. Renshaw. 3s. 6d.

THIS little book is, as far as we are aware, the first one dealing with practical pharmacy which has been written in this country by a lady. It is mainly, therefore, because she is the pioneer pharmaceutical authoress, that we congratulate Miss

Stanley on her production and present her portrait. The book itself is not ambitious. Nor does it profess to be; and we think the authoress has succeeded very creditably in the task which she essayed. "The chief object of this little manual," saith the preface, "is to give students studying for the Assistants' Examination, Society of Apothecaries, a guide of moderate dimensions, yet containing in concise form what should prove a useful adjunct to the ordinary text-books on materia medica, chemistry, and pharmacy." The book does this, and nothing more. The subjects have been arranged in the order given in the syllabus issued by the Society of Apothecaries, the first forty pages being devoted to "chemistry." Then follow "official pharmacy," comprising pharmaceutical and chemical processes for obtaining drugs from their crude sources, Latin terms used in prescriptions, and B.P. preparations. The official remedies and their preparations are reminiscent of the "class notes" of our student days. There is a sort of compressed "Squire" look about them which is rather entertaining, but the condensations doubtless contain all the information necessary for the students who aspire to the "Hall" mark. The "Notes on Dispensing," contained in thirty-four pages, are similarly concise. There are no elaborate directions given for the guidance of the dispenser. The following is a typical example of what occurs under "Excipients of some of the principal drugs":—

MISS MABEL F. STANLEY.



HYDRARG. PERCHLOR.—Sac. lac., glyce. trag.

A quaint paragraph in this section deals with colours of mixtures, but no explanation is vouchsafed as to the reason why "nitric acid and iron" should be "white" or "iodine and carbolic acid" should be "white." The book may be a useful pocket companion to others than those who aspire to be assistants to apothecaries, and, when such slips are corrected, it will be even more valuable.

Quain's Dictionary of Medicine. By Various Writers. Third edition, rewritten and revised, with fourteen coloured plates and other illustrations. Edited by H. M. Murray, M.D., assisted by J. Harold, M.B., and W. C. Bosanquet, M.A., M.D. Pp. xviii + 1892. London, 1902: Longmans, Green & Co. 21s. net.

THE new edition of Sir Richard Quain's well-known "Dictionary" keeps up the reputation of what may be called a medical classic. We must say, however, we do not admire the single volume form, although bound in green and gold—rather slenderly, and would advise those who want it to get the work in two volumes. A number of essential alterations have been made in the new edition, and generally for the better. Many articles which had little or no bearing on practical medicine have been omitted, and, what is of more importance, most of the useless repetitions which were specially irritating in the last issue have been got rid of. In place of these a number of entirely new articles have been introduced, some on "special branches" being particularly valuable. Perhaps a little too much favour has been shown to surgery, and in future selections it might be well for the editors to remember that their work is a medical dictionary. In addition to the new articles the old have been thoroughly revised, and give the most up-to-date information available on each subject. The extent of the work may be gathered from the list of contributors alone. There are nearly 300 of them and not a few are the recognised authorities on their respective subjects. It is almost invidious to make any special reference, but notice may be taken of the article on Actinomycosis by Professor Greenfield, of Edinburgh, which is practically the only account in English of a not unimportant disease. There are also excellent contributions by Major Ross on Malaria, and by Sir Frederick Treves on Physical Education. The list might be indefinitely extended, but it will suffice to say that the book is at once a dictionary and an encyclopædia of medicine. To the busy practitioner who wants to have at hand the latest and most reliable information it should be invaluable, and certainly it is difficult to imagine a better guinea's worth.

Legal Reports.

High Court Cases.

THE SALE OF A CHEMIST'S BUSINESS.

THIS case of *J. H. Read (Limited) v. Arrowsmith & Wyborn (Limited)* came on for hearing before Mr. Justice Buckley on Friday, February 14. Mr. Astbury, who appeared with Mr. Hodge on behalf of the plaintiff company, said the action was brought against Arrowsmith & Wyborn (Limited) and John Pollard. The defendant company was (if he might say so) a one-man company. Pollard was the company. He was managing director, and held all the shares. The action was for the purpose of enforcing an agreement by which the defendant company agreed to sell to the plaintiff company the whole of their business and assets. The plaintiffs also asked for an injunction to restrain the defendants from trying to interfere with the shop and premises which were the asset of the defendant company, for damages, and repayment of the money paid by them to defendants. The plaintiffs were a limited company, carrying on business as chemists and druggists in Victoria Street, London. The defendants Arrowsmith & Wyborn (Limited) were a company, registered in 1898 with a capital of 1,000*l.*, in 1,000 *l.* shares, and it was formed for the purpose of carrying on the business previously carried on by Messrs. Arrowsmith & Wyborn, and which business had been purchased by the defendant John Pollard. Pollard, not being a member of the Pharmaceutical Society, and for the purpose of evading the Act, registered the business he purchased as Arrowsmith & Wyborn (Limited), in order that he might be enabled to carry on this chemist's business. Out of the capital of 1,000 shares, only 817 were issued, and they were all issued to Pollard except seven, which were issued to the signatories of the memorandum of association. Since the incorporation of the company Pollard had acted as its managing director, and he alone carried on the business. There were two nominal directors, but they were mere figureheads. The defendant Pollard did not attend very well to the business. In 1901 he was very heavily pressed by creditors, and the business went from bad to worse. Pollard instructed a man named Collins to sell the shop and premises as a going concern. On June 3, 1901, the defendants' shop and premises were taken possession of by the sheriff under execution by creditors, and the sheriff remained in possession from June 3 to 11. On June 11 the shop was shut up and the business was discontinued. The sheriff was paid out by the help of Collins, and on July 3 Collins, as agent for the defendant company, and instructed by Pollard, sold, or agreed to sell, the shop and premises to the plaintiff company for 950*l.* The plaintiffs paid 250*l.* by way of deposit, and the sale was to be carried out by a transfer of Pollard's shares. The verbal agreement was confirmed in writing. The 250*l.* was paid to Collins, and used by him to pay off the pressing creditors. On July 5 the plaintiff company were put into possession, and they stocked the shop, opened it, and carried on the business there without any objection, Pollard frequently coming in to see them. That went on until October 1, when Pollard came to the shop with Mr. Darrel, who he (counsel) thought was his father-in-law, and by some means got the plaintiffs' manager out of it, took possession, and refused to go. There was a disturbance in the place, and these two persons stayed in the shop all night. On October 3 an application was made to the Court, and on the 9th an order was obtained restraining Pollard from interfering with the plaintiffs in the business. That was a consent-order, Pollard undertaking until the trial not to interfere with the business, and the plaintiffs undertaking to keep an account, and pay the balance of the purchase-money, 700*l.*, into Court, to abide the result of the trial. Pollard, for some reason or other, seemed to have changed his mind between July 31 and October 1, and he had now passed a resolution to wind up the company voluntarily, and had appointed himself liquidator. The first resolution was July 29, 1901, and the confirmatory resolution was passed on August 19. Pollard, as liquidator, purported to rescind the contract with the plaintiffs, and refused to ratify it. Pollard at the time of the sale had deposited the whole of his shares with his brother, George

Pollard, as security for a loan he had raised on them. George Pollard, as mortgagee of these shares after the action had commenced, brought a motion in the High Court, under Section 35 of the Companies Act, to ratify the register by putting his name on as a holder of these shares in the place of John Pollard. That motion was made on October 24, 1901, and an order was made upon it on December 5. The writ in the present action was issued on October 3.

Mr. Justice Buckley said that looking at the contract it appeared to be a contract not to assign a lease, but to assign some shares. How could it be said to be an agreement for an assignment of a lease?

Mr. Astbury remarked that the plaintiffs had been put in possession of the premises. He rather doubted if it was a contract for the assignment of the shares. The contract contained two inconsistent clauses, and there was no question as to which part of the contract the defendants had performed.

Mr. Justice Buckley asked what had been done in the winding-up.

Mr. Astbury said nothing, except that the plaintiffs' 250*l.* had been used for distribution amongst the creditors.

Mr. Crossfield, for the defendants, said he disputed that statement.

Mr. Astbury said he was in a position to prove it. They were suing upon a contract made between Perrett and Collins for the plaintiffs, and Robbins and Gore for the defendants.

Mr. Collins, member of the Corporation of Accountants, who had acted as auditor for the defendant, was then called for the plaintiff company, and his evidence corroborated Counsel's statement as to Pollard's position, and the sale of the business. The sale was negotiated on July 30 at the shop between himself and Mr. Gore and Messrs. Perrett and Lyndale for the plaintiffs. A clause to the effect that the transfer should be effected by the transfer of the whole of the shares to the purchasers was put into the receipt for the purpose of binding Pollard. Pollard afterwards told him that he was perfectly satisfied. When Pollard was asked as to what was to be done with the deposit, Pollard told witness to use it for paying off the pressing creditors of the company. On July 5 he handed over the keys of the premises to Perrett and put the plaintiffs in possession. He subsequently got a letter from Mr. Pollard saying that the sale had been effected without proper authority from the company. At that time he had paid away about 130*l.* of the deposit to creditors, but on receipt of that letter he retained the balance. Cross-examined, witness said that his instructions to sell were given verbally and not in writing. He did not think he had a scrap of paper from John Pollard about the sale.

Mr. Perrett, manager to the plaintiff company, was next called, and corroborated the last witness as to the interview of July 3. In cross-examination, witness said the provision relating to shares which appeared in the receipt was not inserted by his instructions. He went to buy the business and not the shares of the company.

This closed the plaintiffs' case.

Mr. John Pollard, who was then called for the defence, stated, in answer to Mr. Crossfield, that he asked Collins to endeavour to find a customer for the business, the price to be 1,600*l.* He asked Collins to get an offer which could be submitted to the Board. In June Collins did submit an offer of 800*l.*, but he told him not to accept it prior to July 3, and he did not authorise him to accept 950*l.* for the business. Cross-examined by Mr. Astbury, K.C., witness said he qualified as a chemist three years ago. The business was turned into a company because Arrowsmith & Wyborn had businesses at Brighton and elsewhere, and it was intended to unite them all. Arrowsmith & Wyborn were in the business; they each had a 1*l.* share. He maintained that the business was sold to the company, and not to himself or his brother.

You turned the business into a limited company to evade the Pharmacy Acts, and you never were a qualified chemist?—That is not so, I am a chemist.*

In further cross-examination witness admitted there was no agreement to sell any of the other businesses to defendant company.

* The Pollards on the 1902 register of chemists and druggists are:—Albert Pollard (Margate), E. W. Pollard, Ph.C. (Ryde), H. H. Pollard (Ryde), Jonathan Pollard (Bromley), William Pollard (Wakefield), and Wilson H. Pollard (Brighouse).

Mr. Frank Fairly, a wine-merchant and one of the original directors, said he never gave Mr. Pollard, Mr. Collins, or anyone instructions to sell the business. In cross-examination, witness said he did not receive any directors' fees. He did, however, as a director attend meetings.

This concluded the evidence.

Mr. Crossfield having addressed the Court, his Lordship gave judgment without calling for a reply. He said that Pollard was the defendant company throughout, and Pollard was holding himself out to those buyers as a person desirous of selling. There was no resolution by the directors to sell, but there never was any resolution by the directors as to anything except to wind up. He had some doubts with reference to the form of agreement before the defendant Pollard gave his evidence. The cross-examination had removed any doubt that he had, and the defendant had been good enough to prove the plaintiff's case for him. Here there had been made out an agreement which had been partly performed by accepting the deposit and allowing the plaintiffs to go into possession. He held that the agreement was one to purchase the lease of the premises, and not to purchase shares, and he directed that agreement to be specifically performed. The defendants' counter claim was dismissed with costs.

NEEDHAM v. HARRIS.

BEFORE Mr. Justice Darling, sitting to try short causes in the K.B. Division on Friday, February 14, the case of Needham v. Harris was heard. Mr. Lowenthal, who appeared for the plaintiff, said he was a chemist carrying on business at Huddersfield, and having branches in other towns. The defendant was appointed manager of the Leeds branch in 1890. Towards the end of 1892 plaintiff discovered that the defendant had contracted habits of intemperance, and was in the habit of frequenting theatres, &c. It was found that there was a sum of about 500*l.* due on differences in stock and for neglect of duty in not accounting for sums received, &c. Plaintiff proposed to keep the defendant in his employ and give him a chance to retrieve his position, and defendant agreed to execute a mortgage on his life-policy and on his interest under his father's will. On that mortgage plaintiff now claimed 225*l.* The defendant, in his affidavits, stated that he had no recollection whatever of having signed the contract, and that if he did sign it it was under a misapprehension of its nature, and owing to misrepresentation on the part of the plaintiff. He also urged that there had been undue pressure used in order to compel him to sign the document, he having been threatened with exposure. The defendant, who was not represented by counsel, was sworn, and in answer to the Judge said he did not read the deed before he signed it, and he did not know anything about the 5 per-cent.-interest charged. Plaintiff said that if he did not sign the deed he would give him notice to leave. He signed it for the sake of his wife and children.

His Lordship: Did plaintiff say that to you when you signed it?

Defendant: Yes.

His Lordship: Was anybody else present?—No; it was signed behind the counter in the shop in North Street, Leeds.

You have sworn in your affidavit that you never signed the deed at all. Be careful.—I told my solicitor I did not remember signing the deed.

If you don't remember signing, it how do you remember it was signed in the shop?—That was ten years ago.

What had you been doing that you were compelled to sign it?—There was 20*l.* or 30*l.* short in the cash; that was the reason.

Mr. Lowenthal: As a matter of fact it is true, is it not, that you had contracted drinking habits?

Defendant: Certainly not.

On going through the books with Mr. Needham it was agreed that the deficiency was about 500*l.*—No; about 30*l.* I gave up my furniture to settle all the claims against me. My furniture was worth 50*l.* or 60*l.*

Mr. Lowenthal said he did not dispute that the furniture was given up.

His Lordship said that if the defendant had not committed a robbery, but had simply taken money and not accounted for it, and then a threat was made to prosecute him for what was a civil debt, it would be duress. If the furniture, on

the other hand, or the deed was taken as a means of compromising a theft, then it was compounding a felony.

Mr. Lowenthal quoted a case in which the late Mr. Justice Cotton had said that threats were quite justifiable under similar circumstances.

The Plaintiff (Mr. Thomas Needham) was called, and said that his complaint against the defendant was that he had taken to drink, and that he was mixing with companions above his station.

His Lordship: Going with disreputable companions, you mean?—Yes.

In answer to further questions by his Lordship the plaintiff said he believed the defendant made a profit on the business, which he had not accounted for. He believed he had been living too fast.

A witness was called, who said that he was present when defendant signed the mortgage-deed, and that it was read over to him.

His Lordship said he had carefully gone into the case, and he was satisfied that Mr. Needham had not used any improper threats against the defendant to compel him to sign the deed, and that defendant, when he signed it, knew what he was doing. There would be judgment for plaintiff for the amount claimed, with costs.

SACCHARIN CORPORATION (LIMITED) v. DAWSON.

This action came before Mr. Justice Farwell in the Chancery Division on Tuesday, February 11. Mr. Colefax, for the plaintiffs, said that there were really two actions. The first was started in September, 1899, and the second in September, 1901. The plaintiffs, having started the first action, allowed matters to rest, because they did not think that the defendant was embarking upon such extensive infringement of their patents that it would be ultimately necessary to proceed with their action. But in the summer of 1901 they found that he was again infringing, and more seriously, and so they started the second action. The position of the plaintiffs was that they held all the patents which covered the commercial manufacture of a body called saccharin, and although the plaintiffs were not at present aware precisely what patent had been infringed—that was to say, they did not know the process by which it had been infringed—still they said that the article complained of must have been made by one or other of the processes described in their patents, and that their patents covered the process, whatever that process might have been. The defendant in his answers to interrogatories, said he had sold not saccharin, but "a sweet compound" to the Hollingwood Brewery and Bottling Company, near Manchester, but that at the request of that company he had sent them a 2-lb. sample of saccharin. That was his reply to the first action. But in the second action he admitted that he had imported 804 oz. of the "sweet compound," but had, according to the regulations of His Majesty's Customs, to be imported as saccharin. On these facts the plaintiffs alleged that the fact of the infringement was perfectly clear. In the second action the defendant questioned the plaintiffs' title, but the plaintiffs had a practical admission that they were the registered legal owners of the patent.

The defendant appeared in person.

After hearing the witnesses for the plaintiffs, Mr. Justice Farwell, in delivering judgment, said that on the evidence one or other of the plaintiffs' patents must have been infringed, and the plaintiffs were consequently entitled to an inquiry as to damages. With regard to the injunction, a somewhat similar action had been brought by the plaintiffs in 1900 ("Saccharin Corporation (Limited), v. Quincey," 1900, 2 Ch., 245), and Mr. Justice Cozens-Hardy had refused an injunction on the ground that the parcel of saccharin in dispute in that action might have been made under the plaintiffs' patent of 1885, which had then expired, and in respect of which consequently no injunction could be granted. In the present case, however, there was no such difficulty. The evidence proved that the saccharin now in dispute could not have been made under the 1885 patent. He thought that the proper course would be to grant an injunction against the breach of all patents owned by the plaintiffs for the production of saccharin, but limited to the period which the patent with the shortest life had still to run. The defendant to pay the costs of the action.

A GOLDEN REMEDIES CHEQUE.

BEFORE Mr. Justice Darling on Friday, February 14, the action of Pryor and Another *v.* The Golden Remedies Gems of Health Company (Limited) was heard. Mr. Cannot said the plaintiffs were a firm of solicitors, and the action was brought to recover 75*l.* balance due on a dishonoured cheque for 100*l.* The sum of 100*l.* was due on certain chests of tea, and the company gave a post-dated cheque for the amount, and Mr. Ward, its manager, was asked to become security for the amount. He did so by giving his own cheque. Neither of these cheques was paid when they became due. Ward asked plaintiffs not to present his cheque when it became due, and gave a promissory note in its place. After that 25*l.* was paid by the company, leaving 75*l.* due, which was not sued for. The defence, he believed, was that Ward had not received any consideration for his cheque or note. Mr. Montefiore, for the defendant, corroborated this, and Ward said he would submit to judgment for the amount claimed, with costs, as he had satisfied his clients that there was no defence. Judgment accordingly.

R LEHMANN & CO. (LIMITED) *v.* SWISS MILK SOCIETY.

IN the Chancery Division on Thursday, February 13, before Mr. Justice Joyce, the plaintiffs moved for an injunction to restrain the defendants from passing off condensed milk in such a manner as to lead to the belief that it was the plaintiffs' milk. An application was also made that the mark of the defendants might be struck off the register. The plaintiffs are the owners of the "Cow" brand and the "Head" brand of condensed milk. The defendants had registered a mark called the "Cow-head" mark, and this the plaintiffs contended would lead to confusion. Mr. Justice Joyce said he did not think it was a case to be tried on motion.

THORNTON FILMS.

IN the Chancery Division on February 19, before Mr. Justice Kekewich, the case of the Thornton Pickard Manufacturing Company, of Altrincham, *v.* The Thornton Film Company (Limited) came up for hearing on a motion for judgment in default of defence. Plaintiffs, who are manufacturers of photographic appliances, claimed an injunction to restrain the defendant company, who were said to have set up a rival establishment in the same neighbourhood, from using the name, style, or title of the Thornton Company (Limited) or any other style or name which included the name of Thornton, or a name resembling the same, so as to induce the belief that the business carried on by them was the business of the plaintiffs, or had any connection therewith. The defendant company were not represented, and his Lordship granted an injunction as asked, with costs.

County Court Cases.

A SOAP TRANSACTION.

AT the Nottingham County Court on February 8, before his Honour Judge Masterman, D.C.L., the Sales Company (Limited), Monument Station Buildings, London, applied for a new trial of a case brought by them against Charles H. Cudy, of 37 St. Ann's Well Road, Nottingham, to recover 37*l.* 12*s.* 6*d.* for goods sold and delivered, in which a verdict was given for the defendant. Mr. Herbert, for the plaintiff company, contended that the verdict was unreasonable, contrary to the evidence, and one which the jury could not have given had they viewed the whole of the evidence reasonably. The action was brought to recover the balance of the price of certain cases of Fels-Naptha soap. The defence set up was that the soap was not to be paid for until the whole had been removed from the station in Nottingham, and that it was sold upon those terms. He did not dispute that the first order given for the soap was on those terms, but that the second order, the one in dispute, was no so. Mr. Stevenson, for the defence, urged that it was impossible to conceive a case more fit to be decided by a jury of mercantile men, such as that which heard the case, than this one. It was a case where an American inventor had hit on an idea that he was going to revolutionise the soap-trade, and the advertisements being in most of the papers and in other prominent places, setting forth the special terms upon which the soap was sold, were known to

the jury. Mr. Stevenson suggested that the plaintiffs having first brought on the action during the absence of Mr. Fels in America, now thought they would have done better by waiting for his return, and hence the present application. His Honour said he considered the application an amazing one, and if he were to grant it it would be perfectly useless for him to try cases with a jury. He saw no ground for saying that the verdict was unreasonable or unjust, and the application would, therefore, be dismissed with costs.

THE HUSBAND'S LIABILITY.

AT Marylebone County Court on February 14, Mr. John Trude Frupp, surgeon-dentist, Willesden Junction, N.W., brought an action against Mr. Charles King, Witley Bay, claiming twelve guineas in respect of professional services rendered. Mr. Frupp explained that in November last Mrs. King, wife of the defendant, sent her eldest daughter to him to have her teeth examined, and with the request that an estimate should be given for attending to all the dental work which might be necessary. He (plaintiff) furnished an estimate amounting to eighteen guineas, and subsequently received a letter from Mr. King in which he said, "Will pay for the necessary work for my daughter's teeth, but it seems a lot of money." Almost immediately after this work was commenced two younger daughters came with a request from Mrs. King that their teeth also should be seen to. He accordingly sent estimates for this additional work amounting to five and a half and six and a half guineas. When the whole of the work was finished an account for thirty guineas was rendered, but the defendant, while paying eighteen guineas in respect of the work done for the eldest daughter, repudiated his liability in regard to the remaining portion of the account, stating that in November he was living separate from his wife, who had an estate of her own, and that he had recently obtained a divorce from her. The letter concluded with an intimation that Mrs. King had the custody of the children and would have to pay for their maintenance. Plaintiff submitted that the two younger daughters having come to him within two or three days of the first visit of the eldest daughter he could not have acted otherwise than he had done. As a professional man he could not, of course, inquire into the family's domestic matters.

For the defence it was stated that the defendant agreed to be responsible for the account so far as the work done for the eldest daughter was concerned, but he made no arrangements whatever in regard to the other portion of the account as the wife had the custody of the children. Judge Stonor: The defendant says in his letter—referring to the 18*l.*—"it seems a lot of money," and I do not think that the plaintiff was justified in adding to the account without proper instructions. The Plaintiff: But when that letter was sent to me I had no knowledge that the parties were not living together. The Judge: If people take orders from a wife without ascertaining whether she has authority to pledge her husband's credit they do so at their own risk. The defendant bore out his counsel's statement, adding that he published in the Newcastle-on-Tyne papers an intimation that he would not be responsible for any debts incurred by his wife. His wife had an income of her own amounting to 450*l.* a year. He gave his wife no authority in regard to this account, or any general authority. Judgment for defendant, but without costs.

COMMISSION FOR COLLECTING ACCOUNTS.

IN the City of London Court, on February 18, before Judge Rentoul, K.C., an action was brought by John A. Griffin against the Dee Oil Company (Limited), 49 Lime Street, E.C., to recover 4*l.* 13*s.* 4*d.* for commission earned. From the plaintiff's statement it appeared that the defendants had sued him a month before for accounts which he had collected on their behalf, he having been one of their travellers. He now claimed for 5 per cent. commission for the collection of the accounts. The defendants' case was that there was no arrangement to pay the plaintiff any commission for collecting accounts. The plaintiff told the Court that he had no agreement for the payment of the commission, but the defendants gave him instructions to collect the various accounts, and he did not see why he should do it for nothing. The Judge thought it only reasonable that the percentage which covered the obtaining of the order should include collecting the accounts. The custom of paying for collection

was quite different in various trades. The representative of the defendant company said the plaintiff was formerly paid a salary as well as commission. He had three months' trial, and at the end of the three months business was not satisfactory, and the plaintiff received notice. A fresh arrangement was made, and he was put on commission only. Then it came to his knowledge that the plaintiff was collecting money from their customers and keeping it. They sued him, and obtained judgment. It was not the custom of the oil-trade to pay for collecting accounts. The plaintiff said he had been paid 5 per cent. commission for collecting accounts for other firms, and his opinion was that the defendant company advertised for a man like him, and when they had obtained his connection from him they did not want him any more. The Judge said that, as the plaintiff had no special agreement for the payment of commission, he could only rely on the custom of the oil-trade; and, as the custom had not been established, judgment must be entered for the defendants. They did not ask for costs.

Sale of Food and Drugs Act.

LINIMENT OF SOAP.

At Bow Street Police Court on February 14, Arthur Spinks, chemist, 134 Theobald's Road, W.C., was charged before Mr. Marsham with selling liniment of soap containing 40 per cent. of methylated spirit. Mr. Walford, who prosecuted on behalf of the Holborn Borough Council, explained that the case had been adjourned at the request of the defendant, in order that the third sample taken might be sent to Somerset House for analysis. The liniment sold by defendant was not in accordance with the B.P., the standard by which it was usual to judge drugs. On the day the sample was obtained from the defendant thirteen samples were got from chemists. Of that number only three contained methylated spirit. The British Pharmacopœia was drawn up every three or four years by the General Medical Council, on which chemists were represented (*sic*). He (Mr. Walford) was not aware of the result of the analysis at Somerset House.

Mr. Marsham: They say it is compounded of methylated spirit.

The inspector and his assistant then gave evidence of purchase. In reply to Mr. F. W. Beck, the C. D. A. solicitor, who appeared for defendant, the inspector said he was aware that there were two kinds of soap-liniment. He paid 8*d.* for 4 oz. of the liniment, but that included the price of the bottle.

Mr. Beck: Do you know that it would be impossible to get rectified spirit at that price?—Witness: So far as my experience goes I think it would.

James K. Colwell, analyst for the Borough of Holborn, deposed to the analysis. On the day he received the sample in dispute, he was also supplied with twelve other samples for analysis. Of these only three contained methylated spirit. Cross-examined by Mr. Beck, witness said he had no knowledge of any other standard than the British Pharmacopœia. He was not familiar with the pharmacopœia of the London Hospital. Mr. Beck then handed witness Squire's "London Hospitals Pharmacopœias," and pointed out that the formulas there given showed that in the London Hospital liniment of soap was compounded either with methylated spirit or with rectified spirit. At the University Hospital only methylated spirit was used. Mr. Colwell said he did not recognise it as a standard.

Mr. Beck: Do you suggest that everything included in the British Pharmacopœia must be prepared in accordance with it?—Witness: Certainly.

Mr. Beck: Do you mean to say that if such things as starch, sugar, soap, turpentine, beeswax, sherry, lard, cotton-wool, figs, prunes, indiarubber, and brandy are asked for, the B.P. article should be supplied?—Witness: Yes.

Mr. Beck: What is methylated spirit?—Witness: Alcohol containing 10 per cent. of wood spirit.

Mr. Beck: So that, as a matter of fact, only 10 per cent. of the alcohol is other than rectified spirit. What was the total percentage of alcohol in the sample?—Witness: About 45 per cent.

Mr. Beck: Are you assuming that the whole of the spirit in the composition has been treated with wood-naphtha?—Witness: Very nearly, I think. Only 10 per cent. of what I call methylated spirit was a foreign ingredient. The other 90 per cent. was actually ethylic alcohol.

Mr. Beck then read portions of Dr. Attfield's speech at Plymouth, in 1900, in which he condemned the attempt to set up the British Pharmacopœia as a legal standard under the Sale of Food and Drugs Acts. Mr. Colwell said he had heard something of that, but had not paid much attention to it.

Mr. Beck: But you will before this case is over.

He then proceeded to quote other extracts from Attfield's "Digest" to the effect that the British Pharmacopœia is merely a guide to the prescriber. Those responsible for that publication, he said, had never sought powers to set up a standard, satisfactory or unsatisfactory, for household medicines. Dr. Attfield considered that it would be absurd to apply such a standard as the British Pharmacopœia to commercial articles.

Mr. Beck (to witness): Do not you think then that the compilers of the British Pharmacopœia recognise a medicinal and commercial standard?—Yes; there seems to be a distinction drawn.

Mr. Beck: If you were to ask for sugar, would you expect it to be supplied according to the British Pharmacopœia?—Witness: Yes.

Mr. Beck: What! If you went to your grocer for it?—Yes. The sugar of the British Pharmacopœia is a cane sugar. If I asked for refined sugar, I should expect to get it.

Mr. Beck: If you asked for turpentine from an oilman, would you expect to get B.P. turpentine?—If I went to a chemist's shop for it I should. I do not know much about turpentine.

Would you expect to get brandy according to the British Pharmacopœia?—I might not get it of the exact alcoholic strength.

Mr. Beck: But that is the very object of the British Pharmacopœia, to describe the exact strength. You might have the celebrated brand of 1864 or the fusel-oil article manufactured two years ago.

Witness: Liniment of soap is a compound.

Mr. Beck: I hope you do not suppose that brandy is not. (Laughter.)

In answer to further questions witness said soap-liniment had been sold for about thirty years. He had not heard much regarding it until about three months ago. Of course there was a difference between commercial articles and drugs. Mr. Walford, in re-examination, obtained the admission from Mr. Colwell that there were two standards for various articles—one for chemists and another for grocers.

After a prolonged hearing, the case was adjourned for a fortnight.

IS BEESWAX A DRUG?

At the Deaf Police Court on February 20, Stewart Dunn, chemist, was summoned for selling beeswax which Mr. Adams, public analyst, certified to be adulterated with 30 per cent. of paraffin wax. The case was prosecuted by the police superintendent, and Mr. Morice, barrister, defended on behalf of the Chemists' Defence Association. The constable who purchased the wax said he paid 15*d.* for 8 oz. Superintendent Chaney said he had purchased many samples previously from Mr. Dunn, and none had been found wrong before. In cross-examination witness said he had been instructed by the authorities to purchase beeswax from chemists only. He understood from Stone's "Justices' Manual" that it was a drug if bought from a chemist, but not if bought from another tradesman. He produced the third sample of wax, which consisted of three tablets, each branded "W.H.B."

Mr. Morice said he should prove that the defendant had bought this brand on the assurance that it was absolutely pure, and at a specially high price, but he was not proposing to challenge the analysis. He should rely on the legal point. Basing his argument on the reported case of *Fowle v. Fowle*, he said it had been held in that case that beeswax was not a drug. The fact that it was named in the British Pharmacopœia did not suffice to make it a drug. Soft soap, turpentine, resin, starch, and many other substances were named in the Pharmacopœia, but were not in ordinary cases drugs.

The Magistrates' Clerk, quoting from the judgment in *Fowle v. Fowle*, said an inference was conveyed that beeswax might be a drug if sold by a chemist.

Mr. Morice said if sold in a Bond Street shop to a doctor such a circumstance might be a special one, but the ordinary

sales by chemists in no respect differed from those made by other tradesmen. He was ready to call evidence if necessary; but he submitted that he had no case to reply to.

The Magistrates retired to consult. On returning to court, the Chairman said the Bench wished to say, in the first place, that they did not for a moment consider that Mr. Dunn's reputation had been in question. This was purely a technical dispute, and it had not been proved to their satisfaction that beeswax was a drug. They therefore dismissed the summons.

On the application of Superintendent Chaney, they agreed to state a case if applied for.

Mr. W. S. Glyn-Jones and Mr. A. C. Wootton were in court to give evidence for the defence.

Pharmacy Act, 1868.

PROSECUTION UNDER SECTION 17.

At a sitting of the Justiciary Appeal Court, Edinburgh, on February 20, a decision under the Pharmacy Acts, by Sheriff Fyfe, Glasgow, was brought under review. The Sheriff held that under Section 17 of the Pharmacy Act (1868) the registrar of the Pharmaceutical Society had no title to prosecute Dr. Steele Smith in his shop in Springburn Road, Glasgow, for contravening the Act by selling poison to a purchaser without making the entries in a book kept for the purpose, provided by the Act, and having failed to label the bottle, and he dismissed the complaint. The Lords of Appeal now held that the Act empowers the registrar to prosecute under this section, recalled the sheriff's decision, and remitted to him to proceed with the complaint.

Bankruptcies and Failures.

Re WILLIAM LOWSON LOTEN, Chemist and Druggist, Hull.—At the Hull County Court, on February 14, an application was made for the annulment of a bankruptcy-order against this debtor. In making the application, it was stated that the receiving-order was made on November 30, 1900, and since the adjudication Mr. Loten had paid the amount of his liability in full, together with 4-per-cent. interest. As the Official Receiver had no objection, the application was granted.

Re ROGERS BROTHERS, 31 Mincing Lane, E.C., Colonial and Produce Brokers.

A SITTING of the London Bankruptcy Court was held on February 19, before Mr. Registrar Linklater, when Mr. E. B. Rogers was examined. Mr. E. S. Grey, Official Receiver, conducted the examination, and Mr. Carrington appeared for the debtors. The facts elicited have previously been reported, and after the evidence the learned Registrar said he had listened attentively throughout, and all he could gather was that the witness knew nothing about the sales, the consignment of goods, the bills, the exchange cheques, or the books, and yet he had been working from 9 at morn until 12 at night. Witness explained that he was buying and selling all day long. He knew nothing whatever about the obtaining of money on goods, and in fact he was not even aware that loans were being raised. At the rising of the Court the examination was adjourned for a week.

Re REGINALD BETTS, whose present address is unknown lately carried on business as a chemist and druggist at Market Hill, Framlingham.—The creditors met at the Great Eastern Railway Company's Hotel, Liverpool Street, E.C., on Tuesday, February 18, the Official Receiver (Mr. Frederick Messent) presiding. The Official Receiver stated the bankrupt commenced business as a chemist at Framlingham eight or ten years ago with borrowed capital, but several months ago he became pressed for money, and had to seek assistance from his friends. At that time he estimated his assets to be:—Book-debts, 75*l.*; goodwill of business, 300*l.*; stock, 200*l.*; equity of redemption of house and shop, 500*l.*; total, 1,075*l.* The liabilities were about 1,500*l.* At that time the debtor's furniture belonged to him. The bankrupt opened negotiations with Messrs. Gosling & Co., of Diss, and sold the business to them. Subsequently, on December 18, 1901, he departed from his dwelling-house, this being the act of bankruptcy. Mr. Messent further stated that the bank were creditors for 200*l.*, and they would, no doubt, appropriate the life-policy in reduction of their claim. The Official Receiver observed that Mr. Pankhurst, to whom the debtor stated he had sold his goods, hesitated to come forward. He could not say whether the amount for which the business was sold was a fair price. Mr. Walker (representing Mr. Garrard, Framlingham) expressed the opinion that it was sold for less than its value. The meeting decided that the Official Receiver should act as trustee, and he was instructed to make inquiry regarding bankrupt's furniture, alleged to have been sold, and to seize it if allowable.

Gazette.

Partnerships Dissolved.

Beaman, G. W. H., Beaman, H. S., and Wyman, W. S., under the style of the Spa Road Beverage Company, Loftio Street, New Church Street, Bermondsey, S.E., manufacturers of mineral-waters, ginger-beer, and other beverages.

Hook, C., Lauder, F. V., and Neilson, D. M., under the style of C. Hook & Co., Kneller Road, Brockley, S.E., manufacturers of tannic anti-fouling compound; so far as regards F. V. Lauder.

Lewis, F. B., and Mossman, R. A., St. Leonards-on-Sea and Hollington, Sussex, physicians and surgeons.

Richardson, M. J., and Robertson, A. W., under the name of Richardson & Robertson, Gosport, general medical practitioners.

Turner, G., and Elliott, F. J., under the style of Elliott & Turner, Biddenden, Kent, grocers, &c.

The Bankruptcy Acts, 1883 and 1890.

APPLICATION FOR DISCHARGE.

Freeman, Delamark, Dorset Square, N.W., surgeon, discharge suspended for two years, ending January 16, 1904.

Scotch Bankrupt.

Vogt, Henri, under the firm name of Henri Vogt & Co., sometime residing at 64 Princes Street, and now at 124 Queen Street, Peterhead, lately carrying on business as a drug merchant at 6 Rood Lane, London.

Deed of Arrangement.

Nicholls, Allen William, trading as A. W. Nicholls & Son, 85 Broadwall, Stamford Street, Blackfriars, and residing at 44 Hinton Road, Loughborough Junction, surgical plaster manufacturer. Trustee, Wm. H. Goodwin, 24 Coleman Street, E.C., accountant. Dated, February 5; filed, February 12. Liabilities unsecured, 1,250*l.* 17*s.* 4*d.*; estimated net assets, 95*l.* Among the creditors are:—

	£	s.	d.
Baker & Sons, London	17	0	0
Bench James & Son, London	41	0	0
Burgoyne, Burbidges & Co., London	79	0	0
Davy, Hill, Son & Co., London	21	0	0
Durno, Dr., London... ..	11	0	0
Hearon, Squire & Francis (Limited), London	27	0	0
Lamb, Son & France, London	50	0	0
Maclaren, F. J., & Co., Manchester	53	0	0
Nicholls, R. T. (exors of), London	850	0	0
<i>Preferential Creditors.</i>			
Field & Sons, London	12	0	0
Fisher, Clara, Eastbourne	11	0	0

New Companies & Company News

CYANIDE PLANT-SUPPLY COMPANY (LIMITED).—Capital 1,000*l.*, in 1*l.* shares. Objects: To carry on the business of consulting-engineers, mining-engineers, assayers, chemists, &c. Registered office, 56 New Broad Street, E.C.

BELLAMY BROTHERS (LIMITED).—Capital 10,000*l.*, in 1*l.* shares. Objects: To acquire the business carried on at Hamilton Street, Great Grimsby, and at Ugate Louth, both in Lincs., as "Bellamy Brothers," of which J. B. Bellamy and W. H. Bellamy are joint proprietors, and to carry on the business of mineral-water and cordial manufacturers, brewers of alcoholic and non-alcoholic beverages, &c. No initial public issue. The first directors are J. B. Bellamy, W. H. Bellamy, J. Brussey, and H. N. Hickson. Registered office, Hamilton Street, Great Grimsby.

CADRONES (LIMITED).—Capital 2,000*l.*, in 10*l.* shares. Objects: To take over the business of a chemist and druggist carried on by W. C. Jones at 2 Queen's Road, Painswater, W., as "W. C. Jones & Co.," and to carry on the business of chemists, druggists, dyers, salters, oil and colourmen, opticians, &c. The first subscribers are:—W. C. Jones, 4 Queen's Road, Paddington, W., chemist; Mrs. M. Jones, 4 Queen's Road, Paddington, W.; Miss M. E. C. Jones, 4 Queen's Road, Paddington, W.; H. C. Jones, 4 Queen's Road, Paddington, W., gentleman; W. W. C. Jones

4 Queen's Road, Paddington, W., dental surgeon; T. A. L. Rogers, 16 Fenchurch Avenue, E.C., clerk; and Miss M. A. Ingler, 35 Ruffel Road, Willesden Green. No initial public issue.

DURANT & Co. (LIMITED).—Capital 16,000*l.*, in 1*l.* shares. Objects: To acquire the business, including the Dylisia and other trade marks, formulae and processes, of manufacturers of toilet-preparations, ointments, creams, soaps and perfumes, carried on at 21 Rosbery Avenue, E.C., and 19 Mount Pleasant, Clerkenwell, W.C., by L. A. Lewis, A. J. Noyes, and F. C. Monnickendam, as "Durant & Co.," for 11,000*l.* (10,000*l.* payable in shares), and to carry on the business of manufacturers of and dealers in druggists' sundries, &c. The first subscribers are:—R. H. Monnickendam, 24 Oppidans Road, South Hampstead, clerk; J. F. Markham, 61 Constantine Road, Hampstead; traveller; W. S. Cool, 3 St. James' Square, S.W., civil servant; T. J. Mason, Braughing, Ware, Herts, clerk; L. A. Lewis, 10 Pandora Road, West Hampstead, N.W., Colonial broker; A. J. Noyes, 14 Mincing Lane, E.C., Colonial broker; and F. C. Monnickendam, 8 Wyndham Crescent, Dartmouth Park, N., perfumer. No initial public issue. The first directors are L. A. Lewis, A. J. Noyes, and F. C. Monnickendam (managing director for seven years, with 250*l.* per annum for the first three years and 300*l.* per annum after). Registered office, 21 Rosbery Avenue, E.C.

BOUILLON FLEET (LIMITED)—Consideration of the winding-up petition has again been deferred, as the parties are negotiating.

UNITED BRITISH CASTOR OIL COMPANY (LIMITED).—A meeting of the shareholders of this company was held at Winchester House, Old Broad Street, E.C., on February 19, but the proceedings were private.

JOHN OAKLEY & SONS (LIMITED).—The directors propose a final dividend upon the ordinary shares of 5 per cent. for the half-year ended December 31 together with a bonus of 2½ per cent., making 12½ per cent. for the year.

ALFRED BIRD & SONS (LIMITED).—The report of the directors for 1901 states that the profit for the year amounts to 35,524*l.*, which, with the balance brought forward, makes a total of 41,694*l.* The directors propose to appropriate this amount as follows:—Preference dividend for the year (already paid), 7,078*l.*; dividend of 10 per cent. on the ordinary shares, inclusive of interim dividends (5,625*l.*) already paid, 15,000*l.*; to carry to a reserve fund 10,000*l.*, and to carry forward 9,616*l.*

BOVRIL (LIMITED).—The annual meeting of shareholders was held at the company's offices in Old Street, E.C., on February 14. Viscount Duncannon, C.B., chairman of the company, presiding. The chairman, in moving the adoption of the report and balance-sheet, referred to the death of one of their directors, Admiral Sir Edmund Commerell. He then took in detail the items in the report, particulars of which were given in last week's issue (page 273). He reported continual progress in the prosperity of the company. The net profits during the five years of the company's existence have been: 1896 (one and a-half months), 17,076*l.*; 1897, 144,941*l.*; 1898, 146,486*l.*; 1899, 125,557*l.*; 1900, 180,600*l.*; 1901, 157,672*l.* In round figures three-quarters of a million has been earned in five years. Mr. G. Lawson Johnston (Vice-chairman) seconded the adoption of the report. Mr. E. G. Flower said as it was proposed to add 25,000*l.* to reserve fund, raising it to 95,000*l.*, he desired to know whether the directors considered that a sufficient reserve in view of the enormous extent of the business of the company. In order to make the company's position stronger, he thought it would be better to increase the reserve fund, and he would suggest that ½ per cent. of the proposed dividend on the preferred shares should be utilised for that purpose. Mr. B. S. Straus asked if the profits of the year under review were larger than those of 1898 irrespective of all Government and war orders. The Chairman said the profits during the past year were considerably larger than those of 1898, which were the largest profits prior to the war. Dr. Brisbane wanted more information regarding Virol, and the Chairman, in reply, stated that he was not able to give any detailed information. Bovril (Limited) was interested in Virol (Limited) to the extent of 25,000*l.* The motion then put was carried unanimously. The retiring directors (Viscount Duncannon and Dr. Farquharson) were re-elected, and the auditors were re-appointed.

Personalities.

PROFESSOR W. A. TILDEN, F.R.S., has been appointed an elector to the chair of chemistry at Cambridge.

MR. A. HERBERT WILLSON has been appointed dispenser at the Stepney Union Dispensary in succession to Mr. A. F. Gray.

MR. A. SIDNEY CAMPKIN, J.P., chemist and druggist, has been appointed on the sub-committee of the Cambridge Public Health Committee.

MR. H. GADD, J.P., has been re-elected a member of the committee of the Exeter branch of the London Association for the Protection of Trade.

We note that Mr. T. H. W. Idris, of Pratt Street, Camden Town, N.W., has arrived safely in South Africa, as extracts from his letters home are appearing in the daily press.

MR. ARTHUR S. HORNE, of Hele's School, Exeter, has been temporarily appointed demonstrator of botany and chemistry at the Royal Albert Memorial College, Exeter.

DR. JOHN R. GILMOUR, eldest son of Mr. William Gilmour, pharmaceutical chemist, Edinburgh, has been admitted by ballot to the fellowship of the Royal College of Physicians of Edinburgh.

LIEUTENANT GEORGE ELLIS, M.R.C.V.S., son of Mr. A. Ellis, chemist and druggist, South Shields, has been selected by the War Office veterinary department and ordered to proceed immediately to Fiume in Austria to take charge of a large consignment of remounts for the army in South Africa.

DR. INGLIS CLARK, of Edinburgh, lectured at Highgate, N., on Monday evening to a large audience on "Mountaineering." The lecture was exceptionally good, and was illustrated in a practical manner, the illustrations including about a hundred lantern slides of Scotch Mountains, the Tyrol, Mont Blanc, and the Italian Alps, the places photographed being parts which the lecturer has himself ascended.

MR. T. C. W. MARTIN was presented with an illuminated address at a dinner given in his honour at the Old Parr's Head, Aldersgate Street, E.C., on Tuesday, February 18, by the committee of the Junior Pharmacy Ball. Mr. R. L. Cassie, on behalf of the committee, in presenting the address, spoke of the high appreciation and regard in which he was held by his late fellow-committeemen, and felt that this was but a small recognition of the excellent services rendered by him as M.C. of the ball and Chairman of the committee for the last twenty years.

MR. A. R. FOX, chemist and druggist, Exchange Street, Sheffield, has at a by-election been returned to the Sheffield City Council as the Liberal representative of the Crookes-moor ward. Mr. Fox is the only chemist occupying a seat in the Council Chamber of Sheffield Corporation. He was President of the Sheffield Pharmaceutical and Chemical Society twelve years ago, is now senior Vice-President, and three years ago was elected a Fellow of the Linnean Society. Since his election he has received numerous letters of congratulation from pharmacists in different parts of the country, including Mr. Newsholme, President of the Pharmaceutical Society of Great Britain. Mr. Fox is the principal partner of the firm of Wm. Fox & Sons, botanic druggists.

DR. J. REYNOLDS GREEN, F.R.S., Professor of Botany to the Pharmaceutical Society of Great Britain, has been elected to a Fellowship of Downing College, Cambridge. This does not imply that Dr. Green will vacate the Bloomsbury chair; in fact, an authority on University Fellowships informs us that the new Fellow will be expected to do half-a-dozen things—viz. (1) attend to his duties as a member of Council, (2) attend College meetings, (3) attend chapel and feasts occasionally, (4) supervise or direct the studies of the natural science men, (5) give a course of lectures, perhaps, and (6) receive the quarterly emoluments, if any. The last two words are indicative of the fact that Downing College riches are in land, and the emoluments are proverbially low. Still, we have no doubt the professor will be equal to the half-dozen new duties that accompany the honour just conferred upon him.

Westminster Wisdom.

(By our Parliamentary Representative.)

LORD AVEBURY'S SHOPS BILL.

The debate on the second reading of Lord Avebury's Bill to regulate the closing hours of shops, which took place in the House of Lords on Tuesday, ended, as was expected, in the rejection of the proposals. It cannot be imagined that the noble Lord himself anticipated any other result. In his proposals he had ignored one of the leading recommendations of the committee which considered the subject—namely, that the local authority should be empowered to pass provisional orders making such regulations in respect to closing as they might think fit. Instead of leaving the matter in the hands of the local authority, he stuck to his old proposal that action should only be taken upon a requisition from a two-third majority of the shopkeepers, and he thereby rekindled all the old opposition based on the alleged tyranny of majorities and the interference with the liberty of the subject. In passing, it may be noted that Sir Charles Dilke has abided by the views of the Committee in the Bill he has standing on the order paper of the Lower House. The Earl of Wemyss championed the minorities with his wonted vigour. Through his spectacles he could only see "intolerable tyranny," "mistaken philanthropy," and divers other most objectionable things. A few of his colleagues took their cue from him, and shook their solemn heads with good effect, as was afterwards proved. But the heaviest blow against the Bill was dealt by the representative of the Government (Lord Belper), who explained that the proposals had not the approval of the Home Office. This was the crack of the Ministerial whip, and noble lords who came down with doubts suddenly found themselves men of profound conviction. When things were in this state Lord Rosebery intervened. He endeavoured to compromise the Government and at the same time sap the newly gotten convictions of the waverers. "Was not it," he asked, "the Prime Minister himself who declared that it was desirable to give to local authorities such powers as might be necessary to carry out the general wishes of the shopkeeping community with reference to the hours of closing?" Then he asked whether the Government would, in the event of this Bill being lost, be prepared to give effect to that declaration of opinion? The thrust was cleverly placed. It drew laughter and cheers, and after a moment of uneasiness the Duke of Devonshire got up, and somewhat feebly endeavoured to turn the point by suggesting that the ex-Premier had himself complained that the Government programme was already too large. Thereupon the Lord Chancellor, assuming the rôle of the "common-sense adviser," expressed the opinion that it would be disrespectful to the Committee of last year to pass a Bill which was not on the lines of their report. I could not help wondering whether his Lordship of the Woolsack had forgotten his own definition of a "common-sense" view. One day he bluntly told a learned counsel that to argue from common sense was simply to argue from an exaggerated idea of one's own opinions. Be that as it may, the end of the Bill was defeat. Only 26 supported the second reading, while 57 went into the Opposition lobby. The result is that if anything in the matter is to be done this session it will have to be through Sir Charles Dilke's Bill in the Commons, and the state of public business there makes the chances of that measure anything but rosy.

CHEMISTS AND THE BILL.

A large number of petitions in favour of the Bill were presented. Among the petitioners were the following:—

Chemist and Druggist Society in Ireland.
Ulster Pharmaceutical Association of Belfast.
North-East Lancashire Chemists' Association.
Great Yarmouth Pharmaceutical Association.
Hull Chemists' Association.
Wolverhampton and District Chemists' Association.
Aberdeen Pharmaceutical Association.
Inverness Chemists' Association.
Grimsby and District Chemists' and Druggists' Association.
Sheffield Pharmaceutical and Chemical Society.
Glasgow and West of Scotland Pharmaceutical Association.

Dewsbury and District Chemists' Association.
Newcastle-upon-Tyne and District Chemists' Association.
Plymouth, Devonport, Stonehouse and District Chemists' Association.

Wrexham and District Chemists' Association.
Leicester Chemists' Social Union.
Forfarshire and District Chemists' Association.
East Aberdeenshire Chemists' Association.
Bradford and District Chemists' Association.
Cardiff and District Pharmaceutical Association.
Derby and District Chemists' Association.

PROPOSED MINISTER OF INDUSTRY AND COMMERCE.

Mr. D. A. Thomas has given notice of a motion suggesting the appointment of a Minister of Industry and Commerce to take the place of what he calls the obsolete Board of Trade. So far very little attention has been paid to it, for the simple reason that there is practically no prospect of its being discussed, at least this session. I believe a small number of members look upon the proposal with so much favour that they would go into the lobby for it, and undoubtedly there is a considerably larger number who would not be sorry to see a change, although they would not actively assist Mr. Thomas at present. It is not a secret that Mr. Gerald Balfour's appointment as President of the Board of Trade is responsible for a good deal of the discontent.

ONE BILL DEAD.

The bill to abolish the "conscientious objector" in regard to vaccination which was introduced in the House of Lords a fortnight ago by Lord Newton is already dead. It came on for second reading on Monday, but the discussion had not lasted long before it was pointed out that the present Act would run to the end of next year, and that this Bill if passed could only come into operation a few months before that Act would cease to have effect. In these circumstances the prevailing contention among their lordships was that it would be well to postpone any re-opening of the question till the Act came up for renewal or repeal, and this view was made the finding of the House by a considerable majority on a division.

THE TUBERCULOSIS COMMISSION.

In reply to Sir W. Foster, Mr. Long stated on February 13 that the two farms for experimental work are situated at Stansted, in Essex. They belong to Sir James Blyth, who has placed them at the disposal of the Royal Commission free of charge. Laboratories and other necessary buildings are being erected.

VACCINATING MONKEYS.

In the *Lancet* the other week, Dr. S. Monckton Copeman, one of the medical inspectors of the Local Government Board, described experiments in the vaccination of monkeys, the object being to find if children could be vaccinated with vaccine thus obtained. Mr. T. Bayley asked the President of the Local Government Board on February 13 whether the Board had given Dr. Copeman leave to vaccinate children with vaccine so obtained; and Mr. Long replied that Dr. Copeman informed him that he had made experiments of the kind. The Board have not given him permission to vaccinate children with lymph yielded by the monkey, and he has not in fact done so.

THE SUPPLY OF LYMPH.

The Government have announced through Mr. Long that they do not propose to ask Parliament for power to control the lymph supplied from sources outside the Local Government Board. Some members who have been following up the matter with much care are greatly dissatisfied, and there is talk of seeking an opportunity of raising a discussion when the vote for the Local Government Board comes on. The contention is that until the Board takes steps to supply all the lymph that is required by private as well as public vaccinators it is imperative that there should be some Government test of the quality of the article placed on the market by outside makers.

PRESERVATIVES IN FOOD.

Mr. Long was asked the other day whether he has taken any steps to carry out the recommendations of the Pre-

preservatives Committee to standardise the percentage of preservatives allowable in other articles besides butter and milk. From the answer given it appears that the right honourable gentleman has not arrived at a decision as to the course to be followed. Legislation will, of course, be necessary to give effect to the recommendations.

SUGAR DUTIES.

A meeting of members was held in Committee Room 10 on February 17 to receive a deputation from the sugar and confectionery trades in opposition to any increase in the sugar duties. Sir Albert Rollet presided, and the deputation included Messrs. Rowntree (York), Stanley Machin, Blackwell, and others. These gentlemen stated their views, and were asked many questions bearing on the matter.

Trade Notes.

THE GAMEKEEPERS' ANNUAL for 1902 has just been published by Spratts' Patent (Limited), 24 and 25 Fenchurch Street, E.C. It contains articles on dog-breaking, pheasant-rearing, the game laws, game coverts, grouse-rearing, fish-culture, and such gamey subjects, and is priced at 1s.

WELLCOME EXPOSURE RECORD.—Messrs. Burroughs Wellcome & Co. inform us that they can now supply this book in the Italian language, and with exposure and other tables suitable for use in Italy, and other countries on the Mediterranean. The English edition has met with such a demand that a limited edition is being reprinted.

WHITE ARSENIC.—Messrs. Gironés & Henrich, Consejo de Ciento, 329 Barcelona, Spain, who are proprietors of large arsenic mines in the Pyrenees, call attention to their product in our advertisement pages. The firm have recently erected works at Badolera for the manufacture of the best white arsenic, and they are prepared to supply it in any quantity. Mr. J. Hernaman James, Assay Office, Swansea, is the agent in Great Britain, and intending buyers would do well to write to him for quotations.

Business Changes.

PARK'S DRUG-STORES (LIMITED) have just opened premises at 18 Shepherd's Bush Green, W.

MR. J. R. JARRETT, chemist and druggist, has recently opened a business at Glasfryn, Trawsfynydd, Merioneth.

HEWITTS (LIMITED), chemists and druggists, announce that they are giving up their pharmacy at 41 Crook Street, Bolton.

MESSRS. CADRONES (LIMITED), homœopathic chemists, have removed from 23 Bayswater Terrace, to 4 Queen's Road, Bayswater, W.

MR. W. SPENCER TURNER, pharmaceutical chemist, has removed from Norwich, and has reopened his shop at Willingham, Cambs.

THE business of Mr. A. G. Bartley, dispensing chemist (lately conducted by Messrs. H. J. Bounds, Limited), 88 Westbourne Grove, W., has been transferred to Messrs. Lewis & Burrows, 78 Westbourne Grove, W.

THE business of the late Mr. J. R. Mowatt, pharmaceutical chemist, at 109 High Street, Cheltenham, has been purchased and is being carried on by Messrs. H. B. Lloyd, chemist and druggist, and F. H. King, chemist and druggist, under the style of Mowatt & Co.

DRUG-TRADE FIRE-INSURANCE.—Members of the Special Committee appointed by the drug-trade section of the New York Board of Trade and Transportation to protest against the new schedule have had a conference with the Warehouse Committee of the Fire Insurance Exchange, with the result that the Committee will make such changes as they deem necessary and desirable in the present classification, and submit the revised schedule to the Fire-insurance interests at a future meeting for their approval.

Deaths.

GILSON.—On February 15, at Camden Road, N., after a long illness, Mr. Charles Boulter Gilson, late of the Scottish Pharmacie, Montone. Aged 38.

LENG.—Sir William Christopher Leng, the Sheffield journalist, who died early in the morning of February 20 was at the age of seventeen apprenticed to Mr. Fulham, wholesale druggist and drysalter, Hull, and at the conclusion of his apprenticeship commenced business on his own account in Hull as a chemist and druggist. In a short time he found that the mere buying and selling of drugs did not afford sufficient variety for his versatile nature. He accordingly began to write articles for the local papers, and so well did these take that he began to look on business with a somewhat philosophical contempt. His brother (Sir John Leng), was at the time Editor of the *Dundee Advertiser*, and he wrote for that newspaper the foreign articles, and was finally induced by his brother to forsake pills for press work. At the end of eleven years in the drug trade, namely, in 1859, he joined the staff of the *Dundee Advertiser*, and five years later removed to Sheffield, where he did excellent public service by the investigation and exposure at great personal risk of the system of Trade Union picketing which at that time disgraced Sheffield. Sir William's death followed upon a radical operation which he underwent a few days ago.

MICKS.—At Plas Merfyn, Eltham Road, Lee, on February 17, Sir Robert Micks. Aged 67. Sir Robert Micks entered the Inland Revenue service in 1846. He was Receiver-General for Ireland, and subsequently secretary of the department in London. In 1892 he was knighted, and two years later he retired from the service.

REES.—At Ystrad, Rhondda, on February 3, Mr. David Rees, chemist and druggist. Aged 44.

WALKER.—On February 13, at Bath, Mr. Henry John Walker, chemist and druggist. Aged 80. Mr. Walker, who suffered from a weak heart, was found dead in his dining-room. He succeeded to the business founded by his father in Broad Street, Bath, and founded the mineral-water business now carried on as Walker, Raggatt & Co. Mr. Walker was for fifteen years a member of the City Council, for thirty-six years churchwarden of St. Michael's, and for forty-two years a member of the Floral Fête and Band Committee.

Recent Wills.

BOWERBANK.—Probate of the will of Mr. Joseph Bowerbank pharmaceutical chemist, of Cocker mouth (one of the founders of the Pharmaceutical Society of Great Britain), who died on November 21, 1901, has been granted to his executor and executrix, Mr. Michael Falcon, Horstead House, Norwich, gentleman, and Isabella Falcon. The gross value of the estate was 66,244*l.* 7*s.* 6*d.*, and the net personality 56,211*l.* 2*s.* 3*d.*

HUCKLEBRIDGE.—Probate of the will of Mr. Philip Hucklebridge, chemist and druggist, 116 Ebury Street, Eaton Square S.W., who died at the Talbot Hotel, Cuckfield, on October 12, has been granted to his widow, the sole executrix. The gross value of the estate is 608*l.* 17*s.* 5*d.*, and the net personality 486*l.* 1*s.* 8*d.*

HUDSON.—The estate of the late Mr. Joseph Hudson, of 41 Cardigan Road, Headingley, Leeds, drysalter, who died on November 8, 1901, amounted to 8,611*l.* gross, the net personality being 8,455*l.*

TOMLINSON.—The will of Mr. James Tomlinson, chemist and druggist, Chelmsford, who died on October 17 at "The Limes," New London Road, Chelmsford, has been proved by his executors, Mr. Joseph Tilby, The Avenue, Gipsy Hill, Norwood, gentleman; Mr. Donald George Gaul, Untbanks Road, Norwich; and his widow, Mrs. Alice Tomlinson. The gross value of the estate was 7,975*l.* 10*s.* 1*d.*, and the net personality 2,574*l.* 14*s.* 11*d.*

MR. HAMILTON KING, American Consul General at Bangkok, says the direct imports of American chemicals and drugs into Siam are exceedingly good. In 1901 they amounted in value to 11,177 Mexican dollars (about 1,177*l.*)

Elementary Dispensing=practice.

By JOSEPH INCE.

EMULSIONS—(continued).

WE now take up consideration of castor-oil emulsions which are to be compounded in a mortar only. See an excellent form in the B.P. 1898, page 216.

(1)

R	Ol. ricini,			
	Mucilag. acaciæ, aa....	...	...	5j.
	Aq. destillat. ad	...	...	5j.

Mucilage in mortar, add oil and water alternately in portions and not too rapidly. When emulsified, add remaining water by degrees, bearing in mind that this class of emulsions will not bear rapid dilution. Neglect of this precaution is a frequent cause of failure.

(2)

R	Ol. ricini	...	...	5ij.
	Ovi vitell.	...	...	1/2
	Syr. flor. aurant.	...	...	5ss.
	Aq. destillat. ad	...	...	5iss.

Castor-oil emulsions differ in one respect from most others, in that when syrup is present it is better to add it directly to the oil.

Order: Yolk; oil cum syrupe; water, slowly added.

(3)

Paris Codex Formula.

R	Ol. ricini	...	...	5j.
	Pulv. acaciæ	...	...	gr. xx.
	Syrupi...	...	...	5j.
	Aq. destillat. ad	...	...	5j.

Order: Acacia + oil + syrup + water, by degrees.

(4)

Evelina Hospital.

R	Ol. ricini	...	...	m 96
	Pulv. acaciæ,			
	Pulv. sacchari, aa	...	...	9j.
	Aq. carui ad	...	...	5j.

Order: Gum and sugar in mortar; oil in portions, thinned with aq. carui, remainder of which to be added slowly last.

(5)

R	Ol. ricini,			
	Syrupi, aa	...	...	5j.
	Pulv. tragac. comp.	...	...	gr. x.
	Ol. caryoph.	...	...	viij.
	Aq. destillat. ad	...	...	5j.
	Tinct. hyoscyam.	...	...	iv.

In glass measure mix ol. ricini and ol. caryoph., to which, by stirring, add the syrup. This mixture to be added gradually to the compound tragacanth powder in the mortar, thinned down by a little water; dilute tinct. hyoscyam. with remaining water, and add last.

(6)

R	Ol. ricini	...	...	5ij.
	Tinct. catechu	...	...	5j.
	Mucil. acaciæ	...	...	5ij.
	Aq. destillat. ad	...	...	5ij.

Add the tincture to the oil, when it will form a jelly; add mucilage, and gradually dilute with water. Result, a light chocolate coloured emulsion. Many methods have been essayed with this emulsion, but none have proved as satisfactory as the one now given.

Turpentine-emulsions.

These seem to inspire a certain hesitation in the dispenser's mind, for which there is no just cause. The oil is suspended with great facility, and the result is satisfactory. These emulsions are worked with alternate small portions of turpentine and water. When a turpentine emulsion has gone wrong in the making, add water, ten or twenty drops at a time, or more, until suspension has been restored—a statement already made, but which will bear repetition.

(1)

Simplest Formula.

Ol. terebinth....	...	...	5j.
Mucilag.	...	...	5ij.
Aq. destillat. ad	...	...	5j.

Mucilage in mortar; turpentine and water alternately by

degrees; when thoroughly emulsified, water may be stirred in in a gentle stream.

(2)

R	Ol. terebinth....	...	...	5ij.
	Pulv. saponis...	...	...	9ij.
	Aq. destillat. ad	...	...	5j.

Soap in mortar. Repeat method (1).

(3)

R	Ol. terebinth.	...	...	5j.
	Ol. olivæ	...	...	5iss.
	Pulv. acaciæ,			
	Pulv. sacchari, ad	...	...	5ss.
	Tinct. opii	...	...	mxv.
	Aq. destillat. ad	...	...	5ij.

To the mixed gum and sugar add the previously mixed turpentine and oil; water by degrees; tinct. opii, diluted with remaining water, to be added last.

(4)

R	Ol. terebinth.	...	...	5ij.
	Spt. chloroform.	...	...	3ss.
	Pulv. tragac.	...	...	gr. vj.
	Aq. destillat. ad	...	...	5ij.

Spirit on the tragacanth; turpentine and water added by degrees alternately; remaining water last.

(5)

R	Ol. terebinth.	...	...	5j.
	Mist. amygdal.	...	...	5vij.

Answers pretty well owing to the gum acacia (1 in 12) present in the mistura.

(6)

Make linimentum terebinthinæ, B.P. 1898, page 174, strictly according to directions. No heat to be applied in dissolving the soft soap.

Hints and Verses.

Contributed on C. & D. Diary Coupon Postcard A. by Subscribers or their Employés.

A House of Bottles! (p. 563).

Where is the house
You should give a trial
For bottle or phial,
In old or new style?

This is the house!
For carboy or measure
We'll deem it a pleasure
To take, at your leisure,
An order or two.
We'll treat you quite fairly,
We always act squarely,
We never—or rarely—
Send goods that won't do.

This is the house J. & J. built!

—A. E. WARREN (Waverley Park, S.E.).

A HINT for preserving front counter glass-case.—Have you ever noticed how the glass of the front flat counter-case becomes in time permanently covered with minute scratches? In some cases this is so bad that it is almost impossible to see through the glass, thereby rendering the case practically useless for the display of goods. These scratches are in nine cases out of ten caused by customers thoughtlessly tapping on the glass with their money while their purchases are being put up by the attendant behind the counter. Most people when they wish to make a purchase instinctively tender the money in payment at the time of asking for their goods, and our retail readers will accordingly find it a useful plan to take the money first (if change is required it can be handed out with the goods), and so deprive their customers of the opportunity of injuring the glass in the manner mentioned. This plan of taking the money first can easily be adopted in a polite way without attracting notice, and it will be surprising to see what a difference there will be, say, after a lapse of six months or so, between a new glass case and an old one where, in the latter case, the plan suggested had not been adopted. As an additional precaution it is useful also to have on the glass-case an indiarubber coinmat of at least half-a-foot diameter.—C. B. VANCE (Grey-stones, Ireland).

Scientific Progress.

Algerian Oil of Rue.—Von Soden and Henle have completed an investigation of this oil, and find that the ketones which are present are in every respect identical with those in ordinary oil of rue. They find about 90 per cent. of a mixture of normal methyl-nonyl and methyl-heptyl ketones present. In addition there is a small amount of esters, which have a marked effect on the odour of the oil. Although the ester has not been fully examined, it appears to be the acetic-acid ester of the secondary alcohol, and of the fatty alcohol corresponding with either one or both of the ketones.

Stylophorum Diphyllosum.—Schlotterbeck and Watkins have examined this plant (*Pharm. Revue*, 1901, 10), and state that they have isolated the already known alkaloids—chelidonicine, protopine, sanguinarine—and two new bases which they term stylophine and diphyllyne. Stylophine has the formula $C_{15}H_{15}NO_5$, but diphyllyne could not be prepared in a state of sufficient purity for reliable analysis. In addition to these alkaloids, the authors have found chelidonic acid and a crystalline body which appears to be identical with chelidoxanthine. Traces of a compound having an odour like coumarin were also detected.

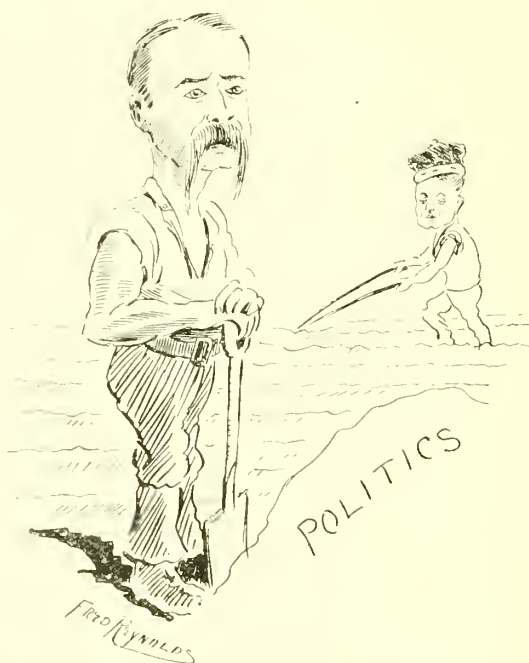
A Delicate Reaction for Nitrates.—According to Cazeneuve, the following is one of the most delicate reactions for small quantities of nitric acid, and may be used for approximately correct estimations of the amount present. In the case of water, for example, 1 litre is evaporated, and the residue is redissolved in distilled water, and a gram of brucine is added. The addition of a little formic acid and a little water, after evaporation, causes a yellow colour to appear, which after twelve hours turns pink. Quantitative estimations are based on a comparison of the colours formed by different samples against a standard under fixed conditions. The method is better than the similar one with sulphuric acid, since the latter often contains nitrates, whereas formic acid seldom, if ever, does.

Sugar-estimation.—At a recent meeting of the Royal Dublin Society, Mr. Richard J. Moss described an improved volumetric method for the determination of sugar. In Pavy's modification of Fehling's method, cupric oxide is reduced in presence of a large excess of ammonia, which prevents the precipitation of cuprous oxide. The temperature of the boiling liquid varies from about 70° C. to 90° C., and the rate of reduction varies to a corresponding extent. Mr. Moss overcomes this objection to the method by using a much smaller quantity of ammonia, and conducting the titration under pressure, at the temperature of boiling water. The reduction of the cupric oxide is apparently instantaneous, and the results are very sharp and constant.

Corydalis Alkaloids.—A lengthy paper by J. Gadamer appears in the last issue of the *Archiv der Pharmazie* on the chemistry of the corydalis alkaloids in which he reviews all the recent work on the subject and gives details of his own new researches, in which he has been assisted by several colleagues. He divides the alkaloids into several groups, of which we have already given some details. He has now obtained two apparently stereoisomeric forms of inactive corydaline, one melting at 134° C. and the other at 156° C. A study of the reactions of this alkaloid leads him to assign to it a formula closely allied to those of canadine and berberine, the well known bodies obtained from *Hydrastis canadensis*, the conclusions being akin to those of Dobbie recently communicated to the Chemical Society of London.

Adulteration of Beeswax with Resin.—It is well known that common resin is sometimes added to beeswax in order to counteract the effect of some other adulterant on the analytical figures, the resulting mixture having nearly all the usual constants for true beeswax. Ferdinand Jean gives the following as an accurate method for determining the amount of resin in such samples (*Ann. Chim. Anal.*, 1901, 448). One gramme of the wax is treated with 80 per cent. alcohol on the water-bath; when the wax is melted the mixture is well shaken, and after a time allowed to cool quietly. It is then filtered through balanced filter-papers. The insoluble portion is washed with cold alcohol until the washings are free from acidity, when the resin and stearic acid will be found in the filtrate, the beeswax and most other bodies being on the filter. The weight of the insoluble portion is taken, and the greater portion of the alcohol is driven off from the filtrate. The residue is taken up with ether, and the ethereal solution shaken with zinc oxide. When the solution is no longer acid the mixed stearate and zinc oxide are collected on a filter, washed with ether, and the ethereal solution of zinc resinolate is decomposed with water and hydrochloric acid. The free resin can then be taken up with petroleum ether and dried and weighed.

Things that Happen—Sometimes.



The Spade and the Plough.

Mr. Evans is a great deal better known to you than he is to me, though he is tolerably well known to me. (Laughter.) He is, as you know, not merely one of the leading spirits of Liverpool Liberalism, but he is occasionally raised to the uneasy throne of the National Liberal Federation. I believe in that capacity, at its last gathering, he deserved well of his country. (Laughter and hear, hear.) I know that is an ambiguous expression, but I prefer to leave it ambiguous. In Liverpool he is distinguished by that constant "spade-work" of which we have heard so much. (Laughter and applause.) I believe there never was such a political navy—(laughter)—as Mr. Evans, and it is in that spirit that I ask you to hold up your hands for a vote of thanks to Mr. Evans.—(The Earl of Rosebery at Liverpool, on February 14, in moving a vote of thanks to Mr. Edward Evans, jun.)

He thought he saw the chemist's friend
Upstanding in a glade;
He looked again and found it was
A navy with a spade.
"If he keeps using that," he said,
"Our fortunes will be made."

He thought he saw a coronet,
Upon a yokel's brow,
He looked again and found it was
A forrow and a plough.
"If these two get to work," he said,
"There will be such a row."

He thought he heard a naughty word
From orchid-labelled "toff";
He listened hard and found it was
A Chamberlain-ic cough.
"If Agriculture's 'on,'" he said,
"My premiership is 'off.'"

DIPHTHERIA-SERUM FOR SWEDEN.—The Royal Order regarding the sale of diphtheria-serum in Sweden which comes into force on May 1 has now been published, and it shows that all serum intended for sale in Sweden, whether imported or of home manufacture, has to be submitted to a comptroller in the bottles in which it is to be sold, and with notification of the date of manufacture, and the strength of the immunisation-units. After examination the comptroller is to retain some of the bottles of every lot submitted to him, in order that he may observe and re-test the serum, so that any number which has become unfit for use may be recalled. The serum may only be sold by pharmacists on the prescription of a Swedish doctor.

Observations and Reflections.

By XRAYSER.

Mr. Walter Hills

is an excellent choice for the Poisons Committee as the representative of pharmacy. I hope he has noticed the insecticide-poisoning case reported in the *C. & D.*, of February 8, page 220. Sold by a florist in a brandy-bottle with the brandy-label left on. Florist did not know it was a poison.

The Licoricine Information

given by Mr. C. Brown, of Didsbury, and Midlander, should be, if possible, brought to the knowledge of the public through a police-court. To sell under the same name a poisonous preparation by the agency of chemists, and under the same name a similar-looking mixture, but with the poison left out, through grocers is a flagrantly dangerous proceeding. Would not the Merchandise-marks Act meet this case?

Two Hackney Chemists

were summoned at the North London Police Court for selling soap-liniment alleged to have contained methylated spirit. Both denied the charge, and the Somerset House chemists have fully justified their denial. Thus for the hundredth time Somerset House has shielded innocent traders from inaccurate analysis. But it is as well to remind chemists that there are public analysts who would like to substitute a board of reference consisting largely of their precious selves for the Somerset House laboratory. Both chemists in this instance, I am glad to note, got costs, but one (who had to close his shop to go to the court) only got 2*l.* 1*s.*, while the other, who had employed a solicitor, got 5*l.* 5*s.*

Lord Milner's Proclamation

regulating the practice of medicine, dentistry, and pharmacy in the Transvaal is not a decree made to wear long. The difficulties thrown in the way of foreign practitioners are reasonable enough while martial law prevails, but they will probably have to be modified when Johannesburg becomes the World-City which Lord Milner has himself prophesied as its early destiny. But Lord Milner and his secretary can hardly have considered the full bearing of their provision against the "practice" of the arts of medicine, dentistry, or pharmacy by unqualified persons. So far as I know the unauthorised "practice" of these arts is not prohibited in any parts of the British Empire except to the extent that the Apothecaries Act of 1815 applies in England and Wales, and a new country with a vast miscellaneous and mining population, which the Transvaal will soon have, is hardly a promising place to begin the experiment. It may be noted in passing that prescribing chemists will be hit by this edict as much as anybody. But it may be said their practice is to be likewise protected. Yes; but there comes the task for Lord Milner's secretary. The practice of medicine, of surgery, of dentistry, may be more or less easily defined; but to define just what it may mean "to practise as a chemist and druggist," how much this covers, and how small a sale of a medicine or a chemical will infringe it, are problems which can easily be settled under martial law, but which would involve endless arguments in a court of law.

The New Calendar

published by the Pharmaceutical Society contains, besides the novelties noted last week, a useful list of judgments which have been given under the Pharmacy Act

in the High Courts of England and Scotland. Sixteen are named, and the effect of each is very briefly indicated. In two or three of the references strict accuracy has been sacrificed to brevity. "Berry & Henderson," 1870, for instance, we are told, established that "provisions of Section 17 do not apply to medicines dispensed by persons registered under the Act." This is simply a quotation of the words of the statute, and does not indicate what the action established. The question in dispute was whether the particular mixture supplied (hydrocyanic acid and water), though ordered in prescription-form, but not by a physician, and with a fictitious name of purchaser attached came within the meaning of the term "medicines dispensed." The Court held that it did. Under "Society v. Piper," 1893, we are told that "proprietary preparations containing poison are not within the exemption of Section 16 relating to patent medicines." But they are if the article is patented. The words "not actually the subjects of letters patent" should be inserted after "proprietary preparations." In "Society v. Turnbull" (Scotland, 1895) it is stated, "Use of title is an offence in Scotland even when such title is associated with modifying words—*e.g.*, photographic chemist." Not always. The words, "when employed by an unregistered person" are wanted to make that statement correct.

Mr. Boot's Ideal

is worth emphasising. It is "to enable all our managers to enjoy a comfortable life under a fair share of remuneration, with the prospect of some secured provision against accident, sickness, or old age." Until this has been provided for, Mr. Boot tells us, his life's aim is still un-reached; that is to say, one of his life's aims, his most cherished aim perhaps, but hardly his only life's aim. The "comfortable life" foreshadowed for the happy managers, I gather, is not yet fully provided; it has had to await the accomplishment of other objects—the organisation of the business, the satisfaction of the directors, proper provision for the managing director, and 12 per cent for the shareholders. The last-named gentry constitute a class which is never quite satisfied. Mr. Whitaker Wright has told us that if you give shareholders 20 per cent. they will complain that with more economical management you could have divided 30 per cent.; so in arriving at his ideal Mr. Boot will have to reckon with this element.

There is Another Side

to this "ideal" aspiration. Other people have ideals as well as Mr. Boot, and without for a moment disparaging his benevolence, it may be permissible to ask, merely as a problem in social economics, whether it is better that he or the 250 chemists whom he displaces should attain their ideal, or at least get somewhere near them. For, presumably, Mr. Boot's ideal and the ideals with which his 250 managers set out in life are incompatible. Nearly all the men who have adopted pharmacy as a career have contemplated independence as the object to be aimed at. To the extent to which their capital and their activity allow, Mr. Boot's companies and other companies working on the same lines have destroyed the possibility of attaining this end. The organisation of great manufacturing businesses and similar concerns in the present day renders the dream of independence practically hopeless in many departments of industry, but in retail trade there is no good reason why this should be the case. I believe it will before long come to be recognised as a distinct misfortune for the community that half-a-dozen capitalists should dispossess a thousand tradesmen in various lines all over the country. The names of Lipton, of Boot, of Lilley & Skinner, and of others are familiar in hundreds of English towns. The personalities behind these names are as mythical to customers as the red lions or the green men of a former generation. They pay rates no doubt, but they cannot render the service of the ordinary citizen. And this system is spreading. Is it to the general advantage?

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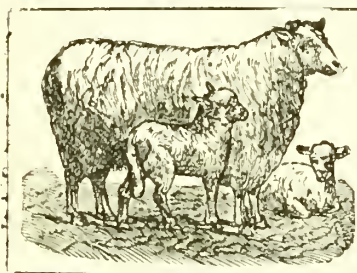
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Best Cleaned LINSEED (TEA)	22/ ¹ / ₂ cwt.	No. 2 Pure PRECIPITATED CHALK	21/ ¹ / ₂ cwt.
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Editorial Comments.

Early-closing.

LORD AVEBURY'S Bill to give shopkeepers the opportunity if they so desire, of closing early, has been throttled once more in the House of Lords, his motion for the second reading on Tuesday having been opposed by the Earl of Wemyss on the ground that the compulsory regulation by Parliament of the hours of labour of full-grown men is "an undue interference with individual liberty." That is the usual argument brought forward by the opponents of reform, but we are happy to note that the debate did not show outspoken sympathy with it, for the defeat of the Bill is rather due to a tactical blunder of the Noble Lord who has so long agitated this question. In his memorandum to the Bill no mention is made in the reference to the Select Committee of last year to the important proposition brought forward by the Prime Minister, the object of which would be to empower local authorities to make such regulations in regard to early-closing as they deem to be necessary for the districts over which they have control. Lord Avebury avoided that recommendation, and his omission was pointed out in the course of the debate by Lord Belper, who spoke on behalf of the Home Secretary, and because of this omission the Home

Secretary feels that he cannot give his assent to the Bill. Strange that the Government, if they are earnest about the matter, should not place a verbal amendment on the paper which would make Lord Salisbury's idea operative. The Bishop of Winchester, who immediately followed Lord Belper, made so powerful a speech on behalf of shop assistants, Earl Spencer backing him, that there seemed a likelihood of the opposition being of little avail, when the Earl of Hardwicke, who, like the Bishop, was also a member of the Select Committee, came to the rescue. He explained that on the committee there was a strong feeling, shared, he believed, by the noble marquis, by himself, and certainly by two others, that the Bill was absolutely unworkable. They were totally opposed to local option of any sort, and considered that, if a majority of two-thirds were to overrule the minority, very hard and cruel results would in numerous instances ensue. Another point raised was the difficulty of carrying out the proposals in a district where there might be more than one local authority, and it was not until the Prime Minister made his suggestion that it was possible to produce a report which had the consent of all the members of the committee. The Earl of Hardwicke thus let out the secret of the Select Committee which has been so well kept. It was at this stage of the debate, which had lasted fully an hour, that Lord Rosebery called attention to the fact that the committee reported there was a serious grievance to be redressed, "that earlier closing would be an immense boon to the shopkeeping community, to shopkeepers and shop assistants alike, and that the present hours are grievously injurious to health, especially in the case of women," and under the circumstances recommended the passing of provisional orders. Supposing, added his Lordship, the Bill is negatived or withdrawn, is the Government prepared to bring in a Bill on their recommended lines? The Duke of Devonshire's reply to this was a mocking reference to Lord Rosebery's Liverpool speeches, in which the noble earl expressed a great deal of doubt whether the Government would make effectual progress with the legislation they had promised, and the Lord Chancellor summed up the opposition by saying that the cardinal principle of the Bill, the mode in which the new regulations were to be enforced, was absolutely inconsistent with the recommendations of the committee. After this, defeat was inevitable, for, as our parliamentary representative points out, the majority in the House took the hint from the members of the Government, and voted against the measure. It is important to note that the reason advanced for its rejection is that the Prime Minister's recommendation was not adopted, because Sir Charles Dilke's Bill happens to embody that idea, and should it reach the House of Lords, this week's majority is bound, in consistency, to support it. That event may not happen this Session, but if chemists' associations petition in favour of it, as they have done for Lord Avebury's, there will be a better chance for progress.

Lagos Pharmacy Law.

WE have referred on several occasions recently to the ordinance promulgated by the Legislative Council of Lagos, and to the opposition which it has induced amongst traders in the colony. A copy of the ordinance has now reached us, and although its main provisions would doubtless be welcomed as enlightened legislation by British pharmacists, it can easily be understood that its stringency may appear objectionable to a community where trading restrictions have been hitherto unknown, and where different conditions of trading prevail. The Bill is entitled "An ordinance to regulate the dispensing and sale of drugs and poisons"—it

is not intended to be merely a "wretched poisons Act." "Drug" includes any medicine, simple or compound, and any medicinal preparation, whether a poison, and a "poison" includes poisonous substances, poisonous drugs, poisonous compounds, and the following:—

Acetate of lead	parations of cyanide of
Acid sulphuric	potassium and of metallic
Acid nitric	cyanides
Acid hydrochloric	Digitalis and its preparations
Acid oxalic	Elaterium
Acid prussic and its prepara-	Emetic tartar
tions	Ergot of rye and its prepara-
Acid carbolic	tions
Aconite and its preparations	Essential oil of almonds unless
Atropine and its preparations	deprived of its prussic acid
Antimony and its preparations	Jaborandi and its preparations
Arsenic and its preparations	Laurel-water
Belladonna and its prepara-	Mercury and its preparations
tions	Nitrate (<i>sic</i>) of amyl
Calabar-bean and its prepara-	Opium and its preparations,
tions	including morphia and its
Cantharides and its prepara-	salts
tions	Preparations of morphia
Chloroform	Oxide of mercury (commonly
Chloral hydrate	known as red precipitate of
Cocaine	mercury)
Conium and its preparations	Ammoniated mercury (com-
Copper sulphate	monly known as white pre-
Copper subacetate (verdigris)	precipitate of mercury)
Corrosive sublimate and its	Strychnine, preparations of
preparations	strychnine, and all poisonous
Croton oil	alkaloids and their salts
Croton chloral	Savin and its oil
Cyanides of potassium, and all	Veratrum viride and its pre-
metallic cyanides and pre-	parations

The word "poison," therefore, is broadly inclusive, and the Governor-in-Council has power to add other articles from time to time as they may crop up. No unlicensed person will be allowed to keep open shop for retailing, dispensing, or compounding, and any person "who shall mix, compound, prepare, sell, retail, or dispense any drug or poison" without a licence and without being registered, shall be liable to a 50*l.* fine, or twelve months' imprisonment, with or without hard labour, in default. Nor can an unregistered or unlicensed person use or exhibit the title "chemist" or "druggist." The examinations are to be conducted by a board of duly qualified medical practitioners, to be appointed by the Governor. The principal bone of contention in the colony appears to be contained in the conditions upon which the licences are to be granted. The candidate must satisfy the Board either that he is (*a*) a qualified chemist and druggist, G.B., or (*b*) that he has been employed in the compounding and dispensing of prescriptions in a hospital or dispensary in any of H.M.'s colonies or dependencies for three years; or he must (*c*) produce a certificate that he has been employed in the compounding and dispensing of prescriptions as an assistant to a duly qualified medical practitioner, apothecary or chemist and druggist for five years; or (*d*) produce either an affidavit that he has kept open shop for the compounding of physicians' prescriptions for the period of three years which immediately preceded the date on which the Ordinance comes into force, or a certificate that he has satisfactorily compounded prescriptions for a doctor during that period. It is Clause (*d*) which the opponents of the Bill have made so much of. They argue, as shown in our issue of January 25 (page 129), that this clause excludes druggists of long standing from the register, restricting that privilege to those only who have been in practice for the three years before the passing of the Ordinance. Although the phrasing is rather ambiguous, we scarcely think that interpretation can be seriously placed upon it. As we read it, the framers of the measure mean to include all who have been in business as druggists or have acted as dispensers for at least three years before the passing of the Ordinance. Provision is made for the keeping of a register by the chief medical officer,

who will publish a list of licences in the Government *Gazette* at stated periods. Another section which is likely to cause heartburning enacts that—

Any member of the Board may from time to time in the day-time, as often as the Board shall think fit, enter the shop of any druggist or the place where any druggist carries on his business or compounds, sells, or dispenses any drugs, and shall and may search, survey, prove, and determine if the drugs or wares used by such druggist in his business or occupation of a druggist are wholesome, fresh, true and unadulterated, and if he find that such drugs or wares are unwholesome, stale, untrue or adulterated, he shall seize such drugs or wares and cause them to be removed to some safe and convenient place, and shall forthwith cause a summons to be issued against the druggist whose goods have been so seized.

A poisons-book must be kept, and the requirements for the sale and dispensing of poisons are the same as those in the British Act. Besides punishing offenders in this section the Magistrate has power to suspend the licence of the convicted druggist for six months on the first conviction, twelve months on the second, and on any subsequent conviction to forfeit the licence altogether. A 5*l.* penalty awaits the druggist who refuses to compound, dispense, or sell, or who does so negligently. These regulations do not apply to "patents," proprietaries, or non-poisonous homoeopathic medicines, if properly packed and labelled. Nor do they apply to mineral waters or the chemicals used in their preparation, nor to the following simple medicinal substances:—

Assafoetida (<i>vis</i>)	Rhubarb
Camphor	Carbonate of magnesia
Castor oil	Quinine
Epsom and Glauber salts	Bark (cinchona)
Linseed meal	Nitre (nitrate of potash)
Senna	

Vegetable gums, oils, or seeds (non-poisonous), and harmless herbal and native medicines are also exempt, the native herbalists and medicine-men being thus left at liberty to exercise their craft—we use the word in the strict sense without regard to home notions as to what pharmacy is. Dispensers already in the service of the Government are exempt from the operation of the ordinance "during such time as the Governor may think fit." Licensed druggists will be exempt from all jury service. The fees suggested are as follows:—On application, 5*s.*; on certificate, 10*s.*; on licence, 2*l.*; on renewal of licence, 10*s.* Lagos does not rank high amongst our colonies, but it is evident that its administrators have high ideas as to what it should be pharmaceutically. They are giving the drug-trade there a law which in the course of a dozen years or so should prove of such benefit to them, that they may fairly claim, as is the case in British colonies in the West Indies, direct representation on the Examining Board. That is a condition which should always be granted, and if the Pharmaceutical Council has the opportunity of advising the Colonial Office on the Lagos ordinance, they should take advantage of it by pressing the principle "home" for general acceptance.

The New Patents Bill.

MR GERALD BALFOUR'S "Bill to amend the law with reference to applications for patents and compulsory licences, and other matters connected therewith" has now been issued from the King's printers. The Bill is intended to give effect to some of the recommendations of the Patents' Committee, and contains some new provisions.

At present many patents are obviously void on account of novelty, but under the clauses of the new Bill the examiner is to search back for fifty years for the purpose of ascertaining whether the invention has been wholly or in part claimed or described in any specification issued

during the period. Should the invention have been previously claimed or described the applicant will be informed and given the option of putting in an amended specification which in its turn will be investigated in the same way as the original claim. If the report that the examiner issues to the Comptroller satisfies the latter official that no objection on the ground of want of novelty exists the specification, will be accepted, and matters will run the usual course. If, however, the Comptroller is not satisfied he can, after hearing the applicant, and unless the objection be removed by amending the specification, determine whether a reference to any, and if so, what prior specifications should be made by way of notice to the public. An appeal can be made to the law officer from the Comptroller's decision—other clauses of this section provide that the investigations and reports shall not be taken to guarantee the validity of any patent, and also that an invention shall not be deemed to have been anticipated simply because of its publication in a specification deposited in the Patent Office pursuant to an application made not less than fifty years before the date of the application for a patent therefor, or of its publication in a provisional specification of any date not followed by a complete specification. For the search an additional fee not exceeding 1*l.* may be imposed, payable on the sealing of the patent. The second clause refers to the compulsory-licence clause in the principal Act, which clause is repealed and other provisions substituted with an object of facilitating the working of compulsory licences. This section is to apply to patents granted before as well as after the commencement of the Act which is, if it passes, to come into operation on January 1 next year.

The Bill seems to be an honest attempt to bring the English patent laws into line with those existing in other countries of like standing, and whilst it will impose much more work on the examiner of patents, it will protect the inventor by warning him that his idea has already been anticipated. It has for some years been a scandal that the Comptroller has had to accept specifications which were obviously invalid by reason of anticipation because he had no option in the matter. The number of patents granted in recent years has been increasing owing to this cause so that the wholesome check which should be the result of this Bill will mean a falling-off of the revenue from this source.

PUBLIC ANALYSTS AND ADULTERATION.

Speaking at the dinner of the Society of Public Analysts last week Mr. T. H. Elliott, of the Local Government Board, said public analysts perform a great deal of unrewarded work, but he believed it is work appreciated by the public, and he pointed to the fact that whereas 27,000 samples were analysed in 1890, 63,000 were submitted in 1900. He was sure that the co-operation of local authorities and public analysts had produced substantial results for the benefit of the community.

"PHARMACOPEDIA."

The authors of this recent work are in the happy position of being able, a few months after publication, to issue a list of errata. It is only authoritative works which can venture upon the acknowledgment of misprints even, and we take it that the authors of "Pharmacopedia" have had sufficient indication that their work has taken such an abiding place in pharmaceutical literature as to justify the collation of the errata. They ask us to state that a copy of the list will be sent free to any purchaser of the book if a stamped envelope or wrapper be supplied to the publisher, Mr. H. Kimpton, 13 Finsbury Street, London, E.C., and they also announce that they will be glad to receive intimation of any further misprints, errors, or omissions which may be detected by readers of the book. These should be sent to Mr. Edmund

White, St. Thomas's Hospital, London, S.E., or to Mr. John Humphrey, 17 Bloomsbury Square, London, W.C. We ought to add that the list issued this week deals mainly with typographical errors.

UP-TO-DATE.

It is a good many years since we first called attention to an antiseptic hair-dressing establishment which was then in full swing in U.S.A., and has since been adopted in Paris. The idea has now, according to the *Lancet*, been taken up in London. In an aristocratic quarter an association has opened a hair-dressing shop where all the razors are fitted with detachable metal handles, so that both blade and handle can be sterilised. The combs are metal, and so are the backs of the brushes. Only hand-brushes are used, and for shaving each customer is given a separate dose of soap-powder, taken straight from a little capsule. The brush is sterilised after each using and the "operators" wear water-proofed sterilisable overalls. The head-rests on the chairs are pneumatic indiarubber pads which can easily be detached and washed. All the basins are made with pedal taps. No information is given as to what it costs to get shaved at this superfine establishment.

FOR SMALLPOX.

"Dr. V. A." informs the Paris edition of the *New York Herald* of a method of treating smallpox, the success of which he vouches for in a half-hearted sort of way. It is as follows:—

The formulas: (1) Vaccine (pure and fresh cow-pox), 1 gr.; pure water, 4 oz. (2) Tartarus emeticus, 1 gr.; pure water, 4 oz. The patient must take a teaspoonful every hour alternately.

In order to calm the fever and delirium, give every ten minutes a teaspoonful of the following potion:—Tincture of belladonna, 2 to 3 drops; pure water, 4 oz. For diminishing the burning sensation of the eruption apply compresses dipped in the infusion of hydrastis-canadensis powder, a teaspoonful in a pound of boiling water. A tablespoonful of this infusion in a glass of sugared water should be used as a gargle.

The effect of the treatment becomes apparent, he says, in twenty-four hours, and in forty-eight hours the disease is cut short, the fever is at an end, and the patient enters into convalescence and soon asks for food.

WARNING TO RADIOGRAPHERS.

Some time ago Dr. C. Mansell Moullin called attention to the injurious effects which sometimes occur in radiography from prolonged exposure to the discharge from the focus-tube. The violet rays, to which constituent of the *x*-rays the injury has been traced, are especially potent in their effects on living tissue, and it is well for operators to guard against untoward results. We have this week seen a typical case of severe dermatitis from this cause. The patient, Mr. J. Orme, of Messrs. Müller, Orme & Co., High Holborn, W.C. has worked with the rays since their discovery, and has not till this month experienced any ill-effects. Mr. Orme on January 25 gave a demonstration of the *x*-rays at a *conversazione* at Owens College, Manchester. He was working with a 10-inch coil with a current of 30 volts, 6 amperes, toned with a Wehnelt break and suitable resistance. During the evening he exposed his hand for three hours, on and off, behind a barium-platinocyanide screen for the purpose of showing the transparency of flesh, and many remarks were made as to the smooth way the apparatus was working, and the perfect manner in which the bones were delineated on the screen. The first unfavourable symptoms were noticed exactly a week afterwards, and since that time the hand has swollen up and layers of dead tissue have been thrown off with great rapidity, sores resembling frost-bites appearing in places. Treatment does not seem to be of much avail, and it is probable that no great improvement will result until a layer of skin of sufficient vitality to begin repair is reached. We have given the particulars of this case in detail so as to impress on workers the serious nature of the

injuries which may result from too long exposure to the *x*-rays. As to prevention, it has been pointed out that if the operator wears gloves, or puts a sheet of cardboard between the tube and the hand, injury from the violet rays is not likely to result, as these rays do not penetrate so deeply as the *x*-rays. This precaution should therefore be adopted in every case where the exposure exceeds a few minutes, and it is to be hoped that ready-guarded tubes will soon be placed on the market. It is needless to point out that the layer of cardboard or glove material makes no appreciable difference on the screen or in the resulting radiographs.

MEDICAL OPINIONS.

There is, we are glad to see, at least one medical man who recognises the justice of the General Medical Council's ruling on the sale of poisons by unqualified persons in "doctors' shops." In a temperately-worded letter to the *Lancet* this gentleman points out that the conditions on which poisons can be sold are clearly laid down in the Pharmacy Act, and that prescriptions containing scheduled poisons can only be dispensed in packages bearing the name and address of the seller. This latter fact calls forth a suggestion from another correspondent that doctors should be allowed to give their "at home" hours on the label as well as the name and address. The prescription-blanks used by physicians frequently have these particulars printed on them, and it does not seem a great step or a serious breach of medical etiquette to put the "at home" hours on the labels of the poorer dispensing-doctor.

TACHIOL.

Particulars are now to hand of the new antiseptic which bears the above name, but is chemically silver fluoride. Tachiol was the subject of a communication to the Royal Medical Academy of Rome on January 26 by Professor Durante, but the experimental work is due to Professor Paternò, who holds the chair of pharmaceutical chemistry in the University of Rome. Compared with mercuric chloride and carbolic acid and its derivatives the germicide properties of tachiol take a foremost place, whilst the toxic power being feebler is in favour of tachiol. Several estimates of the bacterial power of the new antiseptic are given, but are of little interest without a comparative study of the various substances with which it ranks. An investigation is being undertaken, and the full account is promised shortly. The therapeutic uses of tachiol in surgery give great promise; the fact that it does not coagulate albumen, and that injections as strong as 1 per cent, have been made into sinuses without untoward results are important observations. Silver fluoride (Ag F) is not a new salt; it has been known for years, and is prepared by dissolving silver oxide in hydrofluoric acid. The product is a deliquescent and very soluble salt, from which a more stable salt is prepared by drying *in vacuo*. Most of the water is driven off, together with some oxygen and hydrofluoric acid. There does not seem any good reason for giving the salt a fancy name, and Professor Durante does not explain why he has christened it "tachiol." It should be noted that it is the sub-fluoride of silver (Ag₂ F), which is sensitive to light, and which finds use in photo-chemical investigation.

LONDON OPTICIANS NOTE.

The General Purposes Committee of the London School Board have reported on the question of the appointment of oculists for the purpose of testing the eyesight of the children in the senior departments. The committee recommends the appointment of the following seven oculists for one year at a fee of 50 guineas each for 200 school sessions:—Dr. H. G. Critchley, 166 Ebury Street; Mr. R. J. E. Hanson, 5 Harley Street; Dr. J. P. Henry, 41 Welbeck Street; Mr. H. R. B. Hickman, 5 Harley Street; Miss Etile

Sayer, Fulthorpe House, Maida Hill; Mr. T. Snowball, 6 Grote's Buildings, Blackheath; and Mr. F. A. C. Tyrrell, 12 York Street, Portman Square. We have written to each of these oculists calling attention to the fact that there are amongst London chemists many who are competent opticians, and from their connection with pharmacy particularly conversant with the need for carrying out oculists' prescriptions in every detail. We have enclosed in the letters sent to the oculists above named a list of the chemists residing in the districts covered by the London School Board who have obtained the diploma of the Spectacle Makers' Company, and have expressed the hope that preference will be given to those gentlemen. There are, we know, many other chemists in London who cater for optical business, but whose addresses we have no means of obtaining. These should take advantage of the present opportunity to write direct to the official oculists informing them of their willingness to be of service in filling the many oculists' prescriptions which are sure to be written.

IN "TRUTH"

It rarely happens that anyone gets the better of Mr. Labouchere in the pages of *Truth*, but that is the experience of Mr. Edward Evans, jun., this week. *Truth* put into his mouth a statement as to the future of the Liberal party depending on Lord Rosebery being restored to the leadership. Mr. Evans asked for chapter and verse, and Mr. Labouchere responds with words from a speech by Sir E. Russell, also of Liverpool, and apologises to Mr. Evans. By the way, Mr. Reynolds puts rather a wearied look on Mr. Evans's face this week: his notion of spade-work, we presume.

Chemical Society.

THE first of the "afternoon meetings," as some are pleased to call the new style, was held on Wednesday of this week in Burlington House, W., at 5.30. Tea was served in the Library from 5 o'clock, and proved rather a pleasant function. When the Fellows and visitors assembled in the lecture-room below the observant witness discovered that ten benches were well filled, and six and a half of these with comparatively young men; indeed, although it was prophesied that the afternoon meetings would rob the Society of the benefits accruing to it from the presence of the younger members, and those of the glorious privilege of listening to their elders, as a fact there seemed on Wednesday a larger proportion of youth. Professor Emerson Reynolds presided, and on the front benches we noticed Professor Tilden, Dr. Odling, Dr. J. H. Gladstone, Dr. Horace Brown, Professor Adrian Brown, Dr. Divers, Dr. Muller, and Dr. Thorpe. Amongst those connected with pharmaceutical chemistry were Messrs. David Howard, W. L. Howie, C. A. Hill, Joseph Fell, Peter MacEwan, and T. A. Henry, D.Sc.

After the preliminary business of minutes and formal admissions had been disposed of, the President announced the arrangements made by the Council for the

ELECTION OF OFFICERS.

Drs. Hewitt and Thorne were proposed by Mr. D. Howard as auditors of the accounts, and this proposal was seconded by Mr. C. E. Groves and carried. Mr. Groves and Professor Purdie, of St. Andrew's University, are the retiring Vice-Presidents this year, and for their places Professor Meldola and Professor Percy Frankland, were nominated. Professor Meldola vacates the foreign secretaryship, which is to be taken by Professor William Ramsay. The new members of the Council are Mr. A. Harden, chemist to the Institute of Preventive Medicine; Dr. Voelcker, chemist to the Royal Agricultural Society; Mr. Marsh, of Oxford University Chemical Museum; and Dr. Lewkowitch, the fixed-oils expert.

The first paper was that of Mr. H. B. Baker, Dulwich College, on the

COMBINATION OF HYDROGEN AND OXYGEN.

Many attempts have been made by chemists, and particularly by Professors H. B. Dixon and Victor Meyer, to so

thoroughly dry these gases that they will not combine when electric-sparks are passed through the mixed gases, but without success until a month ago, when the author was able to prepare a mixture of hydrogen and oxygen by electrolyzing barium hydroxide. This mixture, when thoroughly dried over phosphorus pentoxide (a process that takes about six months), cannot be exploded by heating over a Bunsen burner or by the passage of sparks. Specimens of the dried mixed gases were shown, and Mr. Baker demonstrated in an elegant manner that molten silver can be dropped through this usually explosive-mixture without a sign of disturbance. The introduction, however, of such a trace of moisture as 3 milligrammes in a million litres of the gases renders the mixture explosive at the temperature of melting silver (about 1,000° C.).

The next paper was by Professor Adrian Brown on

THE ACTION OF ENZYMES,

and in particular that of invertase upon sucrose. Some years ago the author studied the rate at which sucrose is hydrolysed by this ferment, and came to the conclusion that the velocity of decomposition is independent of the amount of sugar present. This behaviour is altogether unlike that generally occurring in chemical reactions, and was at the time accepted as a peculiarity due to the vital activity of the enzyme. This point was also investigated by O'Sullivan for the action of diastase upon starch, with the result that this ferment was found to behave like a chemical hydrolyst—to use the term coined by Dr. Horace Brown to describe a hydrolytic agent. This difference has now been accounted for, since Professor Brown finds that in dilute solutions enzymes behave exactly like chemical agents—i.e., they follow the law of mass action, but in concentrated solutions certain anomalies appear, concerning which only theories can yet be advanced.

This paper was followed by one on the hydrolysis of starch by diastase, contributed by Dr. Horace Brown, F.R.S., and Mr. T. A. Glendinning. It appears that diastase converts starch into maltose in the same way as regards rate of change as invertase hydrolyses sucrose, and also shows the same differences of behaviour in strong and weak solutions. The explanation of this variant method of hydrolysis shown by enzymes is, according to Professor A. Brown, to be found in the loss of time due to the formation of a compound of the enzyme with the substance it decomposes and subsequent splitting up of this combination. While Dr. H. Brown assumes that the enzyme combines with the sucrose or starch, and since the latter is present in very great excess it may be assumed that there is a constant small quantity of this unstable combination with the enzyme present, and since as fast as it is formed it is decomposed, until at last the quantity of sugar or starch becomes so small that a normal mono-molecular action, as it is called by the physico-chemists, progresses to its final condition.

Curiously enough very little discussion took place on these papers which is rather unusual in contributions dealing with brewery problems, but Mr. Croft Hill observed that the reversible production of maltose from glucose by the action of the ferment maltase is not hastened beyond a certain point, no matter how much of the enzyme is present. The President was curious to know if Dr. Brown has isolated the compound of the enzyme and sugar which, he said, is the first stage in hydrolysis, but Dr. Brown said "No."

THE BALLOT

was at this stage declared by the President, all the applicants being elected. They included Messrs. David S. Smith, J. A. L. P. S. I., Rathgar House, Rathgar, Harry Lucas, pharmaceutical chemist, 1 St. Agnes' Place, Kennington Park, S.E. (Demonstrator in Chemistry at the Metropolitan College of Pharmacy), and William Dennis, Ocean Road Pharmacy, South Shields.

It was now considerably after seven o'clock, but the President announced that a short paper on the polymerisation of diazoacetic ester would be read by Mr. O. Silberrad. This, however, contained nothing of pharmaceutical interest except the fact that the silver and mercury compounds which he obtained stood the action of alkalis for days in some cases. They are also exceedingly susceptible to light and had to be made under red glass; here is something for photographic experts to lock into.

Winter Session.

Optical Society.

At the meeting of this Society on February 13, Mr. J. T. SANDELL gave a demonstration of "crystoid" films. This class of film is made by coating plate-glass with two layers of sensitive emulsion and stripping the film when it is sufficiently set. The film which has, it will be seen, no gelatin or celluloid backing, is fastened to the black paper used in the daylight loading system by means of rubber plaster. Before development the length of film is immersed in a 1-per-cent. solution of formaldehyde, which converts it into a substance like the gutta-percha tissue with which pharmacists are familiar. The film is taken from the hardening-bath and put in the developer (Mr. Sandell prefers pyrocatechin and caustic alkali) and developed, fixed, and washed in the usual way. The gelatin expands and yields larger negatives than those exposed, but if this is an objection a bath of alcohol restores it to its original size. The film is dried by slightly squeezing it on to plate-glass or preferably a pulp slab. The demonstration was a great success, and the ease with which the films are manipulated was much admired.

Chemists' Assistants' Association.

At the meeting held at 73 Newman Street, W., on February 13, the President being in the chair, Mr. F. RANSOM, of Hitchin (Herts.), read some notes on

MEDICINAL PLANTS CULTIVATED IN GREAT BRITAIN.

He prefaced his remarks by stating that he would give a few facts concerning the more important plants, and at the same time make some observations based upon practical experience.

Aconite, the most potent of British medicinal plants, was first mentioned. After dealing with the plant from a historical standpoint, Mr. Ransom stated that, like most other plants that have been long in cultivation, there are many varieties of *Aconitum Napellus*, over sixty being known to botanists. These vary in the shade of colour of the flower, in the form of the leaf and in general growth. To what extent they may vary in therapeutic value is not known, but on medicinal-plant farms it is usually attempted to keep as closely as possible to the type, although some variations are generally to be seen. The aconite is now generally described as indigenous, wild specimens being found in various localities in the country, but it is very probable that it originally escaped from gardens. Although described as a perennial plant the term requires a certain modification, as an aconite root really survives but one winter. In the autumn the tap-root from which the flowering stem has been produced dies away, and its place is taken by a younger root which has developed gradually from the parent during the summer, and is destined to bear the flowering stem during the following year. Each root has, therefore only one year's existence. The last edition of the British Pharmacopœia requires aconite-root to be obtained from plants cultivated in Britain in order to ensure as far as possible the use of the correct species. When dried the British-grown roots cannot, however, be always easily distinguished from continental root, and as the price of the latter, being collected from wild plants, is much lower than the former the market is still supplied largely with the foreign drug.

Belladonna followed naturally upon aconite, and again Mr. Ransom gave his hearers an interesting historical sketch of the plant. The origin of the word "belladonna" is disputed, but the generic name, *atropa*, is derived from "atropos," one of the three Fates whose duty it was to cut the thread of life. *Belladonna*, continued Mr. Ransom, is probably the plant most extensively cultivated in this country for purely medicinal purposes. Although indigenous and growing wild in some of the southern counties in sufficient abundance to induce collection, it has for many years been one of the favourite plants for cultivation. Being a perennial and not so liable to destruction by insects and inclement seasons as some other plants, it requires less attention and a crop is more certain. There is, however,

evidence that during the last few years the supply has exceeded the demand, and the abnormally low prices at which the fresh herb, the root, and the green extract have been offered, must have convinced many growers that they might have devoted their labour and lands to more profitable crops. *Belladonna* is grown from seed sown in the early spring, and produces little, if any, herb worth cutting during the first year. In the second and third years the best results are obtained, and the alkaloidal value of the root is believed to be at its highest at about the third year. It has been pointed out recently that the English-grown root contains more extractive than the foreign, an observation which he confirmed. This is not always an advantage; for the liquid extract in particular, a root with less extractive and of average alkaloidal value is preferable. The imported root is, however, very variable in strength, and during the last season it has been increasingly difficult to obtain a sample containing over 0.5 per cent. Estimations made from thirty-four samples of extracts showed a percentage of alkaloid varying from 0.27 to 0.70, while the mean of the thirty-four samples was 0.457 per cent. This affords, said Mr. Ransom, strong evidence of the wisdom of the compilers of the last edition of the Pharmacopœia in introducing standardised preparations of belladonna, and thereby securing approximate uniformity in strength. At the same time he pointed out that preparations of uniform alkaloidal value obtained from a drug so variable in strength, must vary much in colour and general appearance. It has been suggested that no root containing less than 0.47 per cent. of alkaloid should be employed, but even this would not secure uniformity in appearance, as the percentage of extractive is quite as variable as that of the alkaloid.

Henbane was next dealt with. During the Middle Ages, said Mr. Ransom, the root and seed were generally used, but neither of these is now officially recognised. According to A. W. Gerrard, the root of the biennial plant collected during the first year is the richest in alkaloid, and it is quite possible that this may again become official. The seed has rightly been discarded, as there is very little alkaloid in it. It is questionable whether the second year's leaves and flowers of the biennial plant deserve the high reputation which they have obtained in this country, and from the experiments of Gerrard and others it would appear that the leaves collected from the plant during the first year of its growth are equally rich in alkaloid. *Hyoscyamus niger* is not essentially a biennial plant, as, under favourable conditions, it often develops and flowers during the first year. However carefully the seed may be collected, it generally happens that in a crop of henbane some of the plants grow up, flower, and die off during the same year that the seed is sown. In the summer of 1901, when the meteorological conditions were unusually favourable for rapid development, an entire crop in one field produced stems and flower-buds exactly similar to the second year's growth, during the season. The B.P. does not now specify that the leaf must be obtained from plants grown in Britain. The imported leaf is probably collected indiscriminately from the annual and biennial plant, and as it is produced chiefly in Southern Europe, where the summers are warmer than in England, it is probable that the biennial plant is the exception rather than the rule. A careful examination of foreign samples confirms this view, although it is not always easy to determine the variety with certainty. There can be no doubt that better results have been obtained with the British-grown plant, but this is probably chiefly due to the greater care with which the leaves are collected and dried. After dealing with the uncertainty of henbane as a crop, Mr. Ransom stated that several of the recent seasons have been peculiarly unfortunate for henbane, and for some months previous to the 1901 crop being collected the British biennial leaf was almost unobtainable from the growers. It was probably this liability of the crop to failure that influenced the compilers of the Pharmacopœia to allow the use of foreign henbane; but, if the first year's biennial and annual leaf were admitted, home-growers could probably ensure a sufficient supply.

Lettuce, said Mr. Ransom, is still grown to a small extent for the preparation of the green extract, which was formerly official. The extract is prepared from *Lactuca virosa*, an indigenous biennial plant, not found in sufficient quantity in a wild state to collect in this country. *Lactucarium*, or

lettuce opium, is the inspissated juice of this and other species. It has been produced to a considerable extent in the neighbourhood of Edinburgh, but the greater part is now imported from France and Germany. *Lactuca virosa* affords another example of a plant, usually biennial, becoming annual in character under favourable conditions of climate and cultivation.

Cucumber.—One of the most interesting medicinal-plants cultivated in this country is the squirting cucumber—*Echallum elaterium*. The fruit is gathered by hand during the latter part of the summer, the time chosen for picking being when the fruit is nearly ripe. If left too late much of the juice is lost by spontaneous dehiscence, while, if gathered too early, very little of the deposit known as elaterium is obtained. English elaterium, when freshly made, is of a pale-green colour, and in order to preserve this appearance it should be kept from the light. Elaterin, the active principle, should be present to the extent of about 25 per cent. Mr. Ransom has found as much as 28 per cent. in the freshly-prepared drug. Elaterium gradually deteriorates on keeping, but it may continue to answer the official requirement of 20-25 per cent. of elaterin for several years. The squirting cucumber is one of the few plants which do not appear to benefit by a rotation of crops; a field in which it now grows luxuriantly has produced a crop annually for over thirty years.

Lavender was introduced into England in the sixteenth century, and has since been a favourite garden-plant. Attempts have been made to cultivate it for commercial purposes in various parts of the country, but it is only within a radius of about fifty miles from London that much success has been attained. To succeed well it requires a sunny aspect or well-drained land, with careful cultivation, and a mild winter with a warm and dry summer. Lavender is generally propagated by cuttings or subdivision of the younger plants, and upon the care exercised during the earlier stage of growth much of the success depends. During the first summer after planting but little flower is produced, and it is not until the third year that the plants arrive at perfection. In their third and fourth seasons they usually produce their maximum amount of flower, after which many of the plants die off annually. Lavender is very subject to a fungoid disease which attacks the roots and gradually ascends the stem, and the plant now in cultivation does not appear to possess the same vitality as formerly. The harvest usually commences about the second week in August, but varies much according to the season. The earliest record in connection with Mr. Ransom's farm in Hitchin is 1863, when cropping commenced on July 17, and the latest September 3, 1894. The variations in the price of English oil of lavender may occasion some surprise to the retail pharmacist, but for an article for which there is comparatively small demand, and consequently a limited supply, the variations in the season and consequent yield of oil are sufficient explanation. One of the worst years on record is 1881, when the thermometer at Hitchin fell to 5° F. in the shade on January 22. The result was that a large proportion of the plants were killed, and consequently the amount of oil distilled during the following summer was very small. The value of the oil advanced accordingly, and during the following year the scarcity was so severe that the wholesale price was 200s. per lb. and upwards, and but little could be obtained. An almost equally disastrous season was 1895, again following an abnormally cold winter, when the thermometer fell to 0 deg. F. on February 22. It is noteworthy that these two disastrous seasons followed the two winters in which the lowest temperatures on record in the district were registered. Referring to buying oil of lavender as a speculation Mr. Ransom said it had often proved a profitable business, and that an abnormally low price did not necessarily indicate an inferior quality. The question is often asked, continued the speaker, as to the yield of oil of lavender from an acre of ground. One authority estimates it at from 15 to 30 lbs. Mr. Ransom thought 30 lbs. a very exceptional result, adding that 12 lbs. per acre approximates better to the average yield. The yield of oil per still varies very much according to the season and the actual weather at the time of harvest. Mr. Ransom exhibited a chart which he had compiled, showing the average yield of oil from a still of about 750 gals. capacity, during the last twenty years. The year 1887 came first with 12 lbs. 11 oz., while 1892 was the worst

with only 5 lbs. 15½ oz. It is not until 4 or 5 years after distillation that the oil arrives at maturity, and it is therefore impossible to speak decidedly of last year's produce, but as far as can at present be judged it is above the average in quality. A few years ago the production of lavender received some attention in the daily press, and some well-intentioned editors recommended it to farmers as likely to prove a profitable crop. The author's firm has received offers of lavender from various parts of the country during the last year or two, the senders being ignorant of the fact that it is essential that distillation should take place very speedily after cutting. Much of the lavender has doubtless found its way to Covent Garden, but even there prices obtained have hardly been remunerative to the growers. It is probable that some farmers have now discovered that cereals are not the only crops upon which money may be lost. Referring to the difference in the estimation of the perfumer between English and foreign oil, Mr. Ransom said the chief differences in the composition are the smaller ester content and the larger percentage of cineol in the home product. A French oil presenting these characters would be considered to be of inferior quality. A few years ago, when much had just been discovered concerning the constitution of these oils it was predicted that English lavender oil would soon become a thing of the past and only of historical interest. It appears, however, that there remain subtle constituents still to be revealed, and even the most advanced German chemists have not yet placed on the market a synthetic product which can claim to be a substitute for English oil of lavender. It is often found that the freshly-distilled oil is below sp. gr. 0.885 as required by the British Pharmacopœia, and it is a question whether a slightly lower figure should not be substituted. On keeping, the oil gradually becomes heavier, and it is possible that it is intended to exclude the lighter oils of some seasons until they shall become fully matured by age. If so, it should be understood that an oil which fails to answer the official test is not necessarily adulterated, but may be immature.

Rosemary is not cultivated to any large extent in this country. The oil distilled from the home-grown rosemary is, however, very superior to that imported from the south, and the difference in commercial value between the British and foreign products is greater than in the case of any other essential oils. This may be due to the care exercised in distillation and the exclusion of all woody material from the still.

Peppermint.—Mr. Ransom had a good deal to say about this plant, which has been cultivated at or near Mitcham for the last 150 years. It is now also cultivated in Hertford, Bedford, Cambridge, and Lincolnshire. Two varieties of *Mentha piperita* are indigenous, but are not collected in the wild state. In Surrey the varieties cultivated are known as "black" and "white," the latter variety having a green, and the black a purple stem. The oil of the white variety commands a higher price on account of its more delicate flavour, but the yield per still is less, and the plant is not of such vigorous growth. Where both are grown together, the peppermint harvest usually follows that of lavender. The plant is often left on the ground for a few days after cutting, and this partial drying effects an economy in getting more of the herb into the still without affecting the quality of the oil. Mr. Ransom thought it not improbable that the superiority of English over foreign oil is due to the greater care exercised in cultivation—especially to the exclusion of weeds, which, if distilled with the peppermint, produced a more or less impure oil. Dealing with menthol as a constituent of oil of peppermint, he pointed out that the commercial value of the oil is by no means dependent upon the percentage of menthol present. It is difficult at times to find an English oil which will answer the characters and tests inserted in the last edition of the Pharmacopœia, which are mainly dependent upon the percentage of menthol present. It is probable, however, that much the larger part of English oil of peppermint is used in confectionery, where delicacy of flavour is of much more importance than medicinal activity. Several other plants belonging to the order *Labiata*, such as spearmint and pennyroyal, are cultivated in England, but the distillation of their oils is only carried on to a limited extent.

Poppies are grown for the capsules in various districts in this country. They are an uncertain crop, being very

dependent upon the weather. During recent years foreign-grown capsules have been imported, and this has tended to reduce cultivation in this country. The variety most esteemed is that with white petals and seeds. The cultivation of the poppy for the production of opium dates from a very early age, and even in this country it has probably been grown for a longer period than any other medicinal plant.

Rhubarb appears to have been introduced into this country in 1535 by Andrew Boorde, a Carthusian monk, but the species is uncertain. *Rheum rhaponticum* was grown from seed by Mr. Hayward, an apothecary of Banbury, in 1717, and that district still supplies the greater part of English medicinal rhubarb. Shortly afterwards *Rheum palmatum* appears to have been introduced. The seeds of *Rheum officinale* were obtained by the late Daniel Hanbury, and supplied to Mr. Usher of Banbury in 1873, and this species is still cultivated by his successors. Mr. Ransom pointed out that rhubarb is probably the only British-grown drug which is less valued than the foreign product, and that probably an exhaustive chemical investigation of the different varieties might throw some light upon the matter.

Liquorice formed the last subject of the paper. The root appears to have been grown, said Mr. Ransom, in Yorkshire for about 300 years, and Pontefract has become intimately connected with its cultivation. The roots are dug up during the winter from plants that are usually three or four years old. The flavour of the English root is undoubtedly superior to the imported article, but growers find it difficult to compete with that which is produced in Northern Europe and parts of Western Asia.

Replying to questions put to him by several members present, Mr. RANSOM said, referring to drugs imported from America, that, as they nearly all grow in a wild state there, English competition is out of the question.

The meeting closed with a hearty vote of thanks to Mr. Ransom.

North-East Lancashire Chemists' Association.

At the meeting of the Association held on February 13 at the White Bull Hotel, Blackburn, Mr. J. HINDLE gave an interesting lantern-lecture on "Switzerland," which was followed by musical items, the vocalists being Mr. J. Walton and Mr. C. F. Critchley, Miss G. Hindle being the accompanist. The wives and lady friends of the members were present, and the affair was such a success that it was resolved to repeat the experiment at an early date.

Derby Chemists' Association.

The annual meeting, which was postponed from December 4, was held on February 13 at Smith's Restaurant, Derby. There was a good attendance of members, Mr. R. W. Stevenson presiding. The SECRETARY presented a statement of accounts for the past year, which showed a balance in hand of £21. 14s. 11d.

The election of officers was the next business, and Mr. Stevenson was re-elected President, and Mr. Southern (of Belper) Vice-President. It was resolved that Messrs. Dawson, Hefford, and Warrington be elected Vice-Presidents, and that the following gentlemen form the committee:—Messrs. Elmitt, Haynes, Hoare, and Pembleton. The Hon. Secretary (Mr. Cope) was re-elected.

The pharmacy and materia medica classes held in connection with the Technical College were reported to be doing useful work. These classes, together with those for chemistry, physics, and botany, provide nearly all the teaching that is required by pharmaceutical students, and regret was expressed that so few chemists' assistants and apprentices avail themselves of the classes.

School of Pharmacy Students' Association.

ON Friday evening, February 14, at 17 Bloomsbury Square, W.C., Mr. A. N. HIRST, the senior Bell scholar for the present session, read a paper on "Dissociation," a good number of members, both ladies and gentlemen, being present. In a few introductory remarks the CHAIRMAN (Mr. E. T. Neathercoat) commented on the spirit of *bon*

camaraderie that was so evident between all the students and regretted that "dissociation" would have to take place amongst them before long. Mr. Hirst's paper, though brief, was interesting, diagrams and blackboard demonstrations serving to illustrate the main points. At the close several queries were put to and successfully answered by him. The meeting terminated with the customary vote of thanks.

Cardiff Chemists' Assistants' Association.

THE members of this Association met on February 13 for the purpose of hearing a lecture by Dr. D. R. Paterson on

THE EFFECT OF QUININE ON THE MALARIAL PARASITE.

Mr. A. Barrington Sparrow presided, and was supported by Mr. R. Drane, and Mr. A. Hagon, the President and ex-President of the Cardiff Pharmaceutical Society.

Dr. PATERSON commenced by alluding to the importance of the malarial question to this country, in so many of whose possessions malaria makes it almost impossible for men to live, and then went on to sketch the history of the malarial parasite. He described first of all the life cycle of the parasite in the human system, and pointed out how the fits or accessions of fever in malaria are due to the ripening of the spores of the parasite and their discharge into the blood. Passing on next to the effect of quinine upon the malarial disease, the lecturer traced the introduction of cinchona and the discovery of its alkaloids, and said it was Professor Binz, of Bohn who first, in 1869, discovered the fatal effect of solutions of quinine upon low organisms. He showed that the addition of quinine to water in which amœboid organisms were swimming caused a cessation of their movements, and that stronger solutions of the drug brought about complete paralysis, the organisms shrinking up, and being apparently dead. From these and other facts Professor Binz maintained that the true cause of malaria is one of these organisms, and although his contention aroused much opposition at the time, it was finally shown to be correct by the discovery, about 1879, of the malarial organism in the blood. The study of the effect of quinine upon the malarial parasite is interesting from the fact that it is the only means by which the disinfection of the blood stream can be carried out. The Italian authorities have always been much interested in the malarial question, from the dire effect of the disease in the Campagna, and their use of quinine is very extensive. They give it in daily doses of two grammes for four days, of one gramme for four days more, and then two grammes every six days. For the milder forms of the fever, such as the spring tertian and spring quartan forms, this always has an excellent result; but in the more dangerous forms quinine has not such marked influence, so that one has to admit that in these latter cases complete disinfection of the malarial blood cannot be effected, although, on the other hand, Professor Koch, of Berlin, has mentioned that the only rational prophylaxis is the regular administration of large doses of this drug.

The lecture was illustrated throughout by a series of interesting diagrams. A vote of thanks was passed to Dr. Paterson for his address.

Glasgow and West of Scotland Pharmaceutical Association.

IN the absence of the President (Mr. W. L. Currie), Mr. J. A. Russell presided at the meeting held on Friday evening, February 14, in the rooms of the Association in West Regent Street, Glasgow, when Mr. THOMAS MABEN, F.O.S., read a paper on

THE PREPARATION OF ANTITOXIC SERUM.

The author referred especially to the results of the serum treatment in the Glasgow Fever Hospital, the statistics having been culled from the reports of Dr. A. K. Chalmers and Dr. Johnston. Previous to the introduction of the serum treatment of diphtheria, the average death-rate of patients treated in Belvedere Hospital from 1870 to 1894 was 42.6. In the six succeeding years, out of 1212 cases treated, there were 262 deaths, or a death-rate of 21.6 per cent, so that in this hospital alone the serum treatment has saved upwards of 250 lives in the past six years. A rather singular feature in the

relationship between hospital treatment and the treatment in private practice is brought out in the consideration of the statistics for Glasgow generally. It is a well understood fact that the average hospital cases belong to a lower class of society than those treated in private practice. Moreover, large numbers go into the hospital only to die, being moribund when they reach the medical officer and nurse. In such circumstances one would expect that the hospital death-rate would be much higher than in private practice, and in the three years preceding the introduction of serum this was the case. During these three years, 1891-93, the total number of diphtheria cases in Glasgow was 1868 of which 1,555 were treated privately, while 313 were removed to the hospital. In the former cases the mortality was only 29 per cent., while in the hospitals it was as high as 40 per cent. One would naturally have expected that since the introduction of serum the fall in the death-rate in private practice would have kept pace with the fall in hospital cases. It has not, however, done so. In the six years subsequent to 1894 there were in all 3,582 cases in the city; 1,270 were treated in the hospital and 2,312 privately, the death-rate in the former being 21.6 and in the latter 26.6. If statistics prove anything these figures prove that hospital practice has shot far ahead of private practice in the treatment of diphtheria. Mr. Maben cited one case to show the marvellous effects of diphtheria antitoxin. Two days previously he visited the diphtheria-wards of the hospital and there saw a patient two years of age, who was a fortnight ago to all intents and purposes dead. She had actually ceased to breathe, the limbs were cold, and the pulse could not be felt, but with that devotion which characterises the angelic sisterhood, the nurse at once resorted to artificial respiration, maintaining this for some minutes till the medical officer arrived. Having rapidly performed intubation, the doctor injected 21,000 units of serum, with the result that the patient's life was saved. Her recovery has been rapid and continuous, and when he saw her she was happy and contented. This is by no means a solitary case. Besides lowering the death-rate the serum-treatment has also reduced the need for tracheotomy, and even when that operation is performed the mortality is reduced to one-half. The lecturer then described in detail the process by which anti-diphtheritic serum is prepared, dealing with it in the six stages which are followed until the germ-free antitoxin is filled into bulbs. When the serum referred to by Mr. Maben (Messrs. Parke, Davis & Co.'s) comes to the British market it is tested in the laboratories of the Royal Colleges of Physicians and Surgeons, and then certified as to its antitoxin-unit potency, freedom from micro-organisms, and from an excessive amount of antiseptic, so that it is impossible for such accidents to happen as have recently happened with the serum of municipal manufacturers in the United States.

DISCUSSION.

Mr. J. P. GILMOUR referred to the theories regarding the action of anti-toxin. He inclined to the view that the reaction that takes place after administration is of the nature of a chemical reaction, because when equal potencies of anti-toxin and toxin are mixed together and the dose administered to an animal the result is nil.

Mr. GEORGE SINCLAIR wished to know whether the method introduced by Aaronson is still regarded as unsatisfactory. This method consists in precipitating the active principle of anti-toxin and then making a solution of this and injecting it. He believed that another process for the preparation of serum by which it is obtained much more rapidly had been brought out some years ago, in which an electric fluid was employed, but he was not aware whether this had been found to be practicable or not.

Mr. MABEN, in reply, said anti-toxin had been precipitated by chemical means, but this line of investigation had not been sufficiently pursued to enable them to say that the results are successful. Referring further to a point in his paper as to the variability in the potency of serum obtained from different horses and the consequent variation in the bulk of the dose, Mr. Maben pointed out that the mere bulk of a dose is not of vast importance. No doubt for infants it is important that this serum should be as concentrated as possible in order that the dose might be kept small. But in injecting serum subcutaneously the only discomfort is that a feeling of pain appears to occur just at the commence-

ment of the injection. After the first few cubic centimetres are injected the operation is perfectly painless, and there is even no feeling of discomfort with it. In this connection he referred to a series of remarkable experiments just carried out in Belvidere Hospital with smallpox patients. The particulars of these experiments will form the subject of a paper later on in one of the medical journals, and he was not at liberty to refer to them in detail, the only point he wished to state being that sometimes they inject subcutaneously as much as 32 oz. of immunised calf-serum at one injection. So that when dealing with adult patients the demand for a very small dose is largely sentimental.

EARLY CLOSING.

The next business was the presentation by the Secretary of the report on the movement for early closing. Out of 127 circulars sent out he had received 88 replies, and all of these were in favour of shorter hours. Fourteen of them thought that no fee should be imposed for the night bell. In the circumstances the Committee had not seen their way to go any further in the matter, and they solicited the instructions of the meeting. On the motion of Mr. MACKAY, seconded by Mr. J. P. GILMOUR, it was moved that the report be received and the Committee thanked for the work that had been accomplished. This was agreed to.

Western Chemists' Association.

ABOUT two dozen members were present at the meeting of this Association in the Westbourne Restaurant, Craven Road, W., on February 19. The PRESIDENT (Mr. W. F. Gulliver), referring to the death of

MR. WILLIAM MARTINDALE,

one of the earliest members and a past-President of the Association, said he always took the keenest interest in the affairs of the Association and had its welfare at heart. He was the ideal pharmacist, and his loss would be keenly felt. He moved:—

That this Association has heard with the deepest regret of the death of Mr. William Martindale, one of the earliest members and a past-President of the Association, and desires to place on record its appreciation of the services rendered by him to pharmacy and to the Association. Further, it wishes to express the sincere sympathy of its members with Mrs. Martindale and the family in the sad bereavement which has fallen upon them.

The HON. SECRETARY (Mr. W. J. I. Pailp), in seconding, said no resolution, however worded, could adequately express the sense of irreparable loss sustained by this Association and by the whole world of pharmacy in the death of their friend and colleague, Mr. Martindale. He was a man of high intellectual capacity and of wide experience, and was always ready to assist any of his humbler *confrères* who sought his advice. There are many to whom his personality was unknown who feel that they have lost a friend. Pharmacy has lost one who was universally regarded as *facile princeps et dux*. He was an indefatigable worker, a hard fighter, but a generous opponent. To a wider community than that of pharmacy there has been lost a genial and courtly gentleman equally incapable of a mean action and an ungenerous thought, while those who knew him intimately deplore the loss of a kindly, generous, and large-hearted friend, who leaves a memory of affectionate regret and the consciousness of a void that will never be filled.

Mr. J. F. HARRINGTON, as an old friend and fellow-councillor of Mr. Martindale's, referred to his death as a loss, not only to the Association, but to pharmacy throughout the world.

Mr. H. CRACKNELL thought of Mr. Martindale as a typical pharmacist and one whose life would remain as an example for ever before pharmacists.

Mr. DONALD WATSON, who spoke with much emotion, said Mr. Martindale was younger apprentice in the shop where he also was engaged in Carlisle. They had known each other for forty-five years, and in all that time he had always found William Martindale a true friend and straightforward and honest to the backbone.

The resolution was then passed in silence, the members upstanding, after which the meeting was immediately adjourned as a mark of respect to Mr. Martindale's memory.

Mr. Watson had brought with him a photograph, taken in 1857, of the shop in Carlisle, with Mr. Martindale (then a lad), Mr. Watson himself, and their master (Mr. Martindale's uncle) standing in front of the shop. The photograph was passed round, and was an object of much interest to members.

Blackpool and Fylde Chemists' Association.

THE annual meeting was held at the Palatine Hotel on February 11, amongst those present being Messrs. Laurie, Turner, Billington, Ashton, Johnson, Buckley, Greenwood, Mogson, Boothroyd, and J. Sankey, Hon. Secretary. The minutes of the previous annual meeting having been read, the SECRETARY reported on the useful business done by the Association in arranging an interview with the candidates for the Blackpool division by-election, 1900, and explaining the Draft Pharmacy Bill. The candidates received the deputation most cordially, and considered the Bill, on the whole, a much-needed reform. The Draft Pharmacy Bill has been freely discussed at two of the meetings, and resolutions sent to the Pharmaceutical Society's Secretary approving of all the clauses with one exception. Through the pressure brought to bear by the Association, practical chemistry classes were formed and a laboratory completely fitted up, together with a competent teacher, by the Technical School Committee. The hours of closing have been amicably settled. The TREASURER (Mr. Turner) presented the balance-sheet, and spoke about the satisfactory financial position, there being a substantial balance on the right side. The election of officers followed—viz., President, Mr. Councillor Laurie; Vice-Presidents, Messrs. C. H. Turner and Keeley; Treasurer, Mr. Tom Ashton; Secretary, Mr. J. Sankey; and Committee, Messrs. Billington, Johnson, Buckley, Greenwood, and Boothroyd. At the close of the meeting the SECRETARY intimated subscriptions were that due on January 1, the members present, without exception, tendered their coin; and it was hoped absent ones and, in fact, all chemists in business in the Fylde, would follow this example at an early date.

Festivities.

CRICKETERS' REUNION.

The Wholesale Chemists and Druggists' Cricket Championship League held their second annual concert in the Holborn Town Hall, Gray's Inn Road, W.C., on the evening of Friday, February 14. It was in every sense a successful gathering, about four hundred ladies and gentlemen being present, and the musical entertainment arranged by Mr. W. H. Berry was much appreciated. The singers were all professionals, and if we were to select any names for special mention it would be those of Miss Mand Fowler and Miss Kate Willey, who both sang exquisitely, while the funny element was well represented by Mr. Frank Hook and Mr. and Mrs. Berry. The acting stewards were Messrs. C. Gordon Cowen, S. Tappenden and Collins, the last named taking the place of Mr. E. Sibley, Secretary of the League, who was unable to be present owing to family hereavement. During the interval Mr. Peter MacEwan, who presided, presented the silver Challenge cup to Mr. Collett Smith, Captain of the Wellcome Cricket Club, who for the third season in succession have been declared the champions. The chairman mentioned that there had been five competing clubs in 1901, namely, elevens connected with the establishments of Messrs. Burgoyne, Burbidges & Co., Burroughs Wellcome & Co., Dakin & Co., Davy, Hill & Co., and Howards & Sons, but of these the Dakin and Howards elevens have not entered for the 1902 competition, while an eleven from Messrs. Evans, Lescher & Webb's establishment have entered. He regretted that a livelier interest is not shown in the League by Metropolitan wholesale houses, because the league has not only been influential in sustaining interest in cricket, the best of all British games, but it is unique in being the only independent body in London which provides a common meeting ground for the representatives of the wholesale drug trade. For that reason alone he thought wholesalers should support the league well, and he appealed to the heads of the leading houses to encourage cricketing

by their staffs, and he mentioned a few of those who in the past had teams which had either competed for the cup or shown their capabilities with the willow and ball. Amongst these were Messrs. C. J. Hewlett & Son, Hearn Squire & Francis (Limited), Wright Layman, & Umney (Limited), Hodgkinsons, Clarke & Ward, Allen & Hanburys (Limited), S. Maw, Son & Sons, Stevenson & Howell, Stafford Allen & Sons (Limited), and the Exchange "Strollers." He knew that some of the younger partners in these firms are or have been good cricketers, and if they would form elevens to compete for the Cup he was sure that Mr. Collett Smith would be the first to welcome the keener competition. Subsequently, a fitted leather cricket bag was presented to Mr. E. Sibley, Secretary of the League, as a mark of appreciation by his colleagues for the unfailing devotion and consummate energy with which he has furthered the interests of the League since its formation. Mr. Collins received the bag on Mr. Sibley's behalf.

NEWCASTLE-ON-TYNE CHEMISTS' ASSOCIATION.

The annual "smoker" was held on Wednesday evening, February 12, in the Hôtel Métropole, Mr. Robert Wright (President) in the chair. There was a goodly gathering of the craft, together with sundry wholesale and other friends. The programme was attractive and well rendered, mostly by gentlemen connected either directly or indirectly with pharmacy.

CAMBRIDGE PHARMACEUTICAL ASSOCIATION.

An excellent smoking concert, arranged by the Committee of the Cambridge Pharmaceutical Association, took place at the Bull Hotel, Cambridge, on February 13. Mr. A. Sidney Campkin, J.P. (President), presided, and said they had met to celebrate the successful negotiations for closing at 5 P.M. on Thursdays during the winter months. He was glad to say the arrangements are being loyally adhered to by chemists generally throughout the town, and he trusted, despite the slight difficulties they had encountered, they would now regard the change as a permanent one: it was greatly appreciated by both employers and employed, and he believed the public recognised this, and were helping them in the matter. (Applause.) Songs were sung by the President (by special request), Messrs. Collin, E. H. Church, J. Bourne, F. Pink, R. H. Bryan, F. G. Mills, Harry Spencer, and E. E. Hayward; Mr. H. Mason gave selections on a gramophone; Messrs. P. Gray and T. E. Collier performed a violin duet; Mr. G. P. Hosegood and P. Fitzgerald recited, and Mr. J. Gambling executed sleight of hand tricks. The accompanists were Messrs. F. G. Mills and S. C. Coulson. The proceedings concluded with a hearty vote of thanks to the President and to the performers.

A ST. VALENTINE SMOKER.

The Council Chamber of the Holborn Restaurant was occupied on the eve of St. Valentine's Day by a gathering of students from the Westminster College of Pharmacy and their friends. Mr. G. T. Dohson presided, and he was supported by Mr. G. S. V. Wills (Principal of the College) and other friends. Over 100 were present and the proceedings were enthusiastic and the entertainment enjoyable. In the course of the evening the Chairman in toasting "The Westminster College" intimated that he was an old student. Twenty-five years ago he made the acquaintance of Mr. Wills and the College from which he passed the pharmaceutical examinations. He (the speaker) had been out of pharmacy for some years, and like Rip Van Winkle he awoke to find things entirely changed. He congratulated Mr. Wills and the students on the success of the college. A dinner-gong and a framed address of congratulation on his birthday were then presented to Mr. Wills, who thanked the students and the Chairman. Not for many years, he said, had there been such a large number of students in the College. There were about 90 attending the school at present, including eighteen ladies, and since its inception Westminster College had passed 4,270 chemists—almost as many as there are members of the Pharmaceutical Society. The programme included selections on the cornet by Mr. J. Reay (an old Westminster student), pianoforte solos by Mr. H. A. Sutch (who was likewise an able accompanist), and songs by Messrs. W. Sutch, A. Kersey, Godolphin, A. Chapman and Fred Garrick. "Carriages, motors and cycles" were ordered for 11 P.M.



TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects of general interest.

* * * We are compelled to hold over this week many letters and replies to correspondents.

Testing Methylated Liniments.

SIR,—We note your interesting comments in the current issue of *THE CHEMIST AND DRUGGIST* with reference to the detection of methyl alcohol in lin. saponis. The "Riche and Bardy" method is undoubtedly a reliable one, but it is long and tedious. We have carried out some experiments applying Dr. Ashby's test. His method is to take "10 c.c. of the liquid to be tested, add 10 c.c. of a freshly prepared 1 per cent. solution of sodium nitro-prusside and a few drops of ammonium hydrate. The mixture is allowed to stand for fifteen minutes. If a red colour develops, acetone or some of the other constituents of wood spirit is present." In the case of mixtures of methylated and rectified spirits this test is satisfactory, but the presence of the ingredients in lin. saponis necessitates a preliminary treatment. In this case 30 c.c. of the liniment were taken and about 15 c.c. distilled over. This distillate contained the alcohol contaminated with essential oil and camphor. This was diluted with 30 c.c. of water, a few drops of sodium phosphate solution added, then a small quantity of calcium chloride solution. The gelatinous precipitate formed effectually carried down the essential oil and camphor. The mixture was filtered and the filtrate distilled. The first 10 c.c. obtained, which contained practically all the alcohol, was then treated by Ashby's process in the ordinary way. These tests should be applied in daylight, as by artificial light even pure samples show a slightly reddish tinge. We experimented with samples of lin. saponis B.P., lin. saponis meth., and mixtures of these two in varying proportions, and found that the test was of sufficient delicacy to indicate the presence of methylated spirit in a mixture of 1 part of lin. saponis meth. and 3 parts of lin. saponis B.P. This test is a simple and rapid method for determining whether the liniment is prepared from methylated or rectified spirit.

HEARON, REQUIRE & FRANCIS (LIMITED).

38 Southwark Street, S.E., February 15.

[Samples of liquids sent with the above letter show the efficiency of the test. With the methylated liniment (after treatment with calcium phosphate) the test liquid is of a darkish, claret-like colour, and the froth notably tinted. A mixture of rectified liniment 3 parts and methylated liniment 1 part gives a distinct colour tint, especially in regard to the froth, and when compared with the rectified spirit liniment, which gives an amber-coloured test liquid and froth. While the test is not so delicate as Riche and Bardy's, it is better for the dispensing-counter, where the question for settlement usually is not "Does the liniment contain methyl alcohol?" but "Has the liniment been made with methylated spirit or rectified spirit?" To the latter question Ashby's test gives a ready answer.—EDITOR.]

SIR,—Your remarks on the soap-liniment cases are very much to the purpose. It is astonishing that an analyst should not have taken the obvious precaution of comparing the tint produced in testing the suspected liniment with that produced by one known to be "methylated," in which case he would have avoided a serious error. It is another proof that many of the public analysts issue their certificates with apparently no consideration of the serious results that may ensue from their rash and inaccurate assertions. When the decision depends merely on a colour-reaction one must be particularly careful. It is quite different from the true analytical result, where one isolates a compound and proves by its chemical and physical properties what it really is. Riche and Bardy's test is no doubt a very good one in

default of anything better, but it requires to be used with discrimination. Methyl compounds are probably much more largely distributed in plants than has been determined. We readily recognise salicylate on account of its marked odour and reactions; but other esters would more easily escape notice. Formic aldehyde under appropriate conditions is reduced, and is a potential source of methyl compounds. I do not quite gather what you indicate as being specially noted by Mr. Ward. The use that may be made of the lower boiling-point of the methyl iodide in order to obtain it in a concentrated state was fully explained by Professor Dittmar several years ago (*Quant. Chem. Analysis*, page 297).

Yours, &c.

Eoinburgh, February 17.

D. B. DOTT.

SIR,—In the Editorial article appearing in last week's issue of *THE CHEMIST AND DRUGGIST* reference is made to a paper communicated by Mr. Stark and myself in 1890 to the British Pharmaceutical Conference. You state that in examining the Riche and Bardy test we gave reasons for preferring white floss silk to white merino for preserving a record of the amount of methyl aniline violet present. This is incorrect. As a matter of fact, no reason was given, but my notes show that for the purpose of exhibiting dyed specimens, indicating various percentages of methylated spirit, silk displayed the shades better than wool. Your suggestion that public analysts should be careful when testing soap-liniment for methylated spirit may well be extended to compound tincture of benzoin, which I have noticed on several occasions to give a violet dye, when tested with Riche and Bardy's method, although known to be made with pure spirit. This fact I found was also known to the Government analysts. The Conference paper, as its title indicates, was devoted to a comparative examination of the various tests for methylated spirit, and it is of interest to note that Mr. J. S. Ward's experience with pure soap-liniment containing 5 per cent. of methylated spirit, distinguishable by this test, confirms our experience with the same percentage in pure alcohol. In the paper we sum up as follows:—

We conclude that Riche and Bardy's test is both delicate and reliable, and that by it the presence of 0.5 per cent. of wood spirit (equal to 5 per cent. of methylated spirit) can be satisfactorily proved. But the process for its application, requiring, as it does, twelve hours' constant attention and some considerable outlay, is far from suited for the use of the ordinary pharmacist.

In addition, I would like to emphasise your remarks about the care required in performing the test, and especially the necessity of control experiments of known composition for comparison.

Yours faithfully,

40 Charlotte Street, E.C.

E. J. MILLARD.

Asafetida.

SIR,—The note published on the subject of the pharmacopoeial requirements for asafetida will be fresh in the memory of your readers (see *C. & D.*, December 1899). Attention was then called to the fact that it was absolutely impossible to obtain in commerce asafetida having the ash requirements of the British Pharmacopoeia, and also the required solubility in alcohol. Reference was made in these articles to the fact that picked tears of asafetida might be found corresponding with these requirements. The object of this letter is to put buyers on their guard against certain shipments of tears of asafetida which look highly satisfactory, but which on closer examination are found to be a deliberate fraud. The tears have a duller appearance than is usually the case with genuine asafetida, and the fracture instead of being smooth and milky white is rough and greyish. I have been able to separate from these tears some with a milky white brittle fracture having an ash as low as 1.1 per cent. and others easily cut with a knife have an ash equivalent to over 60 per cent. The ash of an average sample drawn from three cases in question amounts to 57.6 per cent. (principally siliceous matter) showing how few of the non-adulterated tears can be picked from the cases in question. The proportion soluble in 90 per cent. alcohol is less than 20 per cent.

Yours truly,

48 Southwark Street, S.E.

JOHN C. UMNEY.

Lymph-tests before Sale.

SIR,—Most of your readers doubtless retail calf-lymph, and many of them must have felt sore when the failure of the article to produce the desired vesicles, or its success in exciting some pustular eruption, has been laid to their charge. Authorities on the subject state that one should not use a tube of lymph if it is not translucent, or if it shows any haziness or a dull silver-grey streak, such as denotes the presence of micro-organisms. This appears to be a counsel of perfection, but one seldom, if ever, sees a lymph which would escape unscathed from such a test. Practically every tube of lymph has a hazy grey track in its centre, or is traversed by a silver-grey serrated streak, much like what one gets on a culture-tube of *streptococcus pyogenes albus*. On the other hand, it is only less annoying to sell inferior lymph than to use it, and if some rough practical tests could be devised by which the vendor and the user might estimate the value of a lymph before using it, the gain would be great for both.

Yours sincerely,

Dublin, February 16. J. C. MCWALTER, M.A., D.P.H.

Glasgow Patent-prices.

SIR,—In your issue of February 15 your correspondent says that "The recent effort to advance the retail prices of patents and proprietaries in Glasgow is a *fiasco*." It is evident that the wish must be father to the thought, and that your correspondent has not taken the necessary trouble to find out how this effort to benefit the trade has worked out. I have pleasure in saying that all the chemists who have signed the agreement are loyally carrying it out, and the statement is not accurate. One hundred and twelve firms were approached, and have signed the agreement, and only three refusals to sign it were met with in all that number, while of the three, one agreed to adopt the revised prices, and the other two are situated at the extreme end of two separate districts. Letters of satisfaction have been numerous, and if the writer of your paragraph wished to test the matter, by making a few purchases, he would have found the advanced prices asked for. Your correspondent is evidently disappointed at the small amount of the advance, but this matter was gone into carefully by business-firms who know that the days of face-prices and large profits are over, and they were chiefly desirous of securing a profit of 10 to 15 per cent. instead of no profit at all. I may say that the present agreement only holds good so long as there is no serious threatening of cutting-prices being adopted by any large firm. Since this matter was taken up, the local wholesale houses, including Edinburgh, have also agreed to advance their wholesale prices for a number of articles that were sold at a loss, or little or no profit, and any of the retailers who wish to go in for extreme cutting after February will have to do so at their own expense.

I am yours faithfully,

Glasgow, February 18. J. W. SUTHERLAND.

[We shall return to this subject next week.—EDITOR].

Mr. MacIver's Motion.

Mr. Vincent Wood, Albion Place, Blackfriars, S.E., writes calling attention to the motion which Mr. D. MacIver has on the notice-papers of the House of Commons (see *C. & D.*, January 25, page 173), in which it is proposed that a duty of 5 per cent., *ad val.*, be placed on all imports. Mr. Wood trusts Mr. MacIver will be successful in getting a Bill passed in Parliament to this effect. "As everyone is aware," he continues, "this country is flooded with cheap, foreign, inferior goods and pauper aliens who crowd our own workmen out of the labour market, and it would be as well if our buyers remember this, and endeavour to place their orders with British manufacturers only."

Consulting Druggist.

SIR,—It is rather amusing that the Pharmaceutical Society of Ireland has not some more important complaint than that referred to at the last meeting of Council. It is well known that half the pharmaceutical chemists in Belfast openly break the law by employing unqualified assistants, and also infringe very much on the domain of medical men, as many of the local L.P.S.I.'s have a private consulting-room, and openly charge for their advice. So that if the Irish Council

wish to direct their attention to a grievance which they think they have against doctors for having consulting-rooms in druggists' shops, they should allow the local Chemists' Association to move in the matter. The Council might also direct the attention of the General Medical Council to this question of consulting-pharmacists. Statistics can be given by

Yours truly,

A BELFAST CHEMIST.

Dispensing Notes.

Strong Lotion.

SIR,—This lotion, though apparently strong, when diluted as directed by the physician, works out at less than 1-per-cent. protargol, which strength is used in Edinburgh frequently.

Yours truly,

N. (151/47.)

SIR,—In reply to your Manchester correspondent in last week's "Dispensing Notes," I do not think that the solution of protargol prescribed can be termed "a strong lotion." The strength as given in the prescription (when diluted) is about 1 per cent., whereas I have frequently dispensed a 3-per-cent. solution as an eye-lotion, and no ill-effects have been noticed. We also use a 50-per-cent. solution of protargol as a paint.

Yours truly,

H. D. KELF.

Dispenser East Dulwich Infirmary.

An Incompatibility.

The *Bulletin de Pharmacie du Sud-est* gives an unusual example of incompatibility in which fluoride of ammonium is ordered in a prescription with hydrochloric acid. Fluoric acid is liberated after standing a short time, and the bottle soon shows signs of corrosion.

A Curiosity.

An Edinburgh subscriber had to dispense the following the other day, and sends it as an exercise for Minor students:—

Extract. opii ...	...	...	gr. iss.
Extract. belladon. ...	...	...	gr. iss.
Cocain. hydrochlor. ...	...	...	gr. $\frac{1}{2}$
Ferri alumen. ...	...	...	gr. ij.
Cupri. acetat. ...	...	...	gr. ij.
Acid. tannic. ...	...	...	gr. ij.
Acid. gallic. ...	...	...	gr. ij.
Ol. theobrom. ...	...	...	q.s.

Ft. pess. Mt. x.

Shake the Bottle.

SIR,—Will you kindly inform me whether a mixture containing acid. hydrocyan. dil. such as the following, should or should not be sent out with a "shake" label:—

Liq. bismuthi. ...	...	...	ʒj.
Liq. morph. hyd. ...	...	...	ʒclx.
Acid. hydrocyan. dil. ...	...	...	ʒxlviij.
Tr. cocci ...	...	...	ʒix.
Aq. chloroformi ad ...	...	...	ʒiv.

M.

Sig.: ʒij. in water every four hours.

The above mixture is quite clear—at least, when first made.

INQUIRER. (128/26)

[A "shake-the-bottle" label should be used. Owing to the extreme volatility of the acid the air-space in the bottle becomes saturated with the vapour, hydrocyanic acid, and it is to dissolve this that the remaining contents of the bottle are shaken before pouring out each dose.]

105/17. *Roup* (Birmingham).—There is no difficulty in massing equal parts of antimonial powder, calomel, and powdered ginger with copaiba. We have done it often. Use a thickish balsam, and when you get the mass weigh it into 72-gr. pieces, which divide into 24 pills.

105/21. *F. P.*—Sooner or later an ammoniacal sodium salicylate mixture changes in colour, whether made with artificial or natural salicylic acid. See note on this point page 243 of "The Art of Dispensing."

147/14. *Dingi*.—A 5-oz. mixture containing 1 gr. of extract of digitalis, and directed to be given "one spoonful every hour," implies, we should think, in the case of an adult, a teaspoonful, for the frequency with which the medicine is given indicates that a small dose is required.

Legal Queries.

Before sending in a query for reply in this section see if the subject is not dealt with in "The Chemists' and Druggists' Diary"—Trade Law or Pharmacy Law Sections.

140/7. *An Apprentice*.—Thanks; but not in the case referred to.

139/34. *G. W.* submits a specimen of a handbill for extract of malt and cod-liver oil which has been held by the Board of Inland Revenue to be liable. The Board does not say why, but we have little doubt that it is due to the fact that the headlines are: "Your Children will grow Healthy and Strong if, when ailing, you give them —'s Extract of Malt and Cod-liver Oil." Here the words "when ailing" clearly imply that the preparation is a remedy, and we recommend our correspondent to substitute for these headlines the following—"Healthy and Strong Children," and under it, "By giving them," &c.

139/10. *C.*—There is no mystery about the licence case, February 1, page 204. The charge was for exhibiting without holding a licence. Compare paragraph on entire drugs, THE CHEMISTS' AND DRUGGISTS' DIARY, page 281.

147/28. *Inquirer*.—A horse-medicine containing opium must be labelled "Poison," and can only be sold by a registered chemist and druggist or medical practitioner, or by a veterinary surgeon for an animal under his care.

134/30. *X. J.*—Of the labels which you send, the following involve liability to stamp-duty:—Children's cough-mixture, because it is ordered "to be taken when the cough is troublesome"; cough-lozenges, for the same reason; blood-purifier, because it is recommended for curing "abscesses, spots, pimples, and skin-eruptions."

147/18. *Sacch.*—A prize-competition depending upon the greatest number of empty packages returned is not a lottery, and is perfectly legal. A lottery is a distribution of prizes by lot or by chance: thus, if you were to put into each of one hundred packages a coupon, and three only entitled the purchasers to prizes and ninety-seven coupons carried no prizes, this would be a lottery.

145/82. *Perplexity*.—The sale of liniments prepared with methylated spirit (as sanctioned by the Board of Inland Revenue) is quite legal if the purchaser is informed of the fact at the time of the purchase.

146/46. *Cachet* puts up for sale by grocers who are not licensed to sell stamped medicines, headache and similar powders consisting of an entire drug, and the Board of Inland Revenue have required the retailers to take out a licence. In the case of the headache-powders you mention this may be due to the fact that the label makes the article proprietary, owing to the words "The Duplex Series" occurring on it, which are in the nature of a trade-mark, and "Cachet" is used as a prefix. One may say "Headache-cachets," or "Headache-powders in cachets"; but "Cachet headache-powders" is a doubtful title. We also note the words "A boon to the general community" on the label. The phrase is on the border-line of recommendation. "Beware of imitations" implies a claim to an occult secret in preparing them; and "No water or milk required, as in other powders" almost comes into Class IV. (THE CHEMISTS' AND DRUGGISTS' DIARY, page 200). Another label is for "Headache, tic, and neuralgia powders"; three complaints are thus specified, and the Board allow two—not more. It is open to argument whether the sale of any "headache-powders" consisting of an entire drug by unlicensed persons is legal or not. The Act specifies the conditions upon which they may be sold unstamped, and one of these conditions is that the retailer, if not a chemist, should be licensed.

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months.

31/1. *Kimia*.—Nauheim Treatment.—The following represents the composition of a series of baths in use at one of the largest and best-known hydropathic establishments in England. The quantities given are for a bath of 40 gals.:—

No.	Sodium Chloride	Calcium Chloride	Sodium Bicarbonate	Hydrochloric Acid
1	4 lbs.	6 oz.	None	None
2	5 lbs.	8 oz.	None	None
3	6 lbs.	10 oz.	6 oz.	7 fl. oz.
4	7 lbs.	10 oz.	8 oz.	9 fl. oz.
5	9 lbs.	11 oz.	1 lb.	18½ fl. oz.
6	11 lbs.	12 oz.	1½ lb.	27½ fl. oz.

The salts in the form of tablets are the subject of letters-patent granted to Dr. Sandow; and Messrs. Buchner, Schacht & Co., 55 Fore Street, London, E.C., are the agents for the patentee.

141/13. *Sacch. Fucci*.—The precipitate in your Tonic-mixture is ferric phosphate. You will find the following modification of the formula go better:—

Quininae sulphatis	...	...	gr. xij.
Tr. ferri per-chlor.	...	...	ʒss.
Acid. phosphoric. dil.	...	...	ʒj.
Aquæ	...	...	ʒiij.

Misce et adde—

Glycerini	...	...	ʒiij.
Tr. aurantii	...	...	ʒij.
Tr. nucis vomice	...	...	ʒss.
Sacchari usti	...	...	ʒivj.
Aquæ ad	...	...	ʒvj.

Set aside for a day and filter.

Dose: A tablespoonful in water thrice daily immediately before food.

Orange-flower water is not a nice addition in this case, the fresh orange-peel sufficing.

141/17. *Erica*.—Profit sharing.—In estimating the net profits of a business for the purpose of profit-sharing with employés, the whole of the expenses of management should be included in the charges against gross profit. Your case being that of a retail chemist, you should allow at least 200% a year for your services, and 5 per cent. for the capital invested in the business. Stock should be taken in order to ascertain whether the profits of the year have been affected one way or other by that factor. It is not usual to give any share in profits to those who have been less than a year in the employment, and the shares are distributed according to salaries rather than on the basis of length of service.

139/46. *A. A. (Leghorn)*.—Smelling-salts are made by filling the bottle with roughly powdered ammonium carbonate and moistening it with a volatile essence such as the following:—

Camphor.	...	...	ʒss.
Ess. moschi	...	...	ʒss.
Ol. limonis	...	...	ʒxxx.
Ol. lavand. ang.	...	...	ʒj.
Ol. bergamot.	...	...	ʒij.
Ol. caryoph.	...	...	ʒxxx.
Liq. ammon. fort.	...	...	ʒviij.

M.

143/58. *Alpha*.—Preliminary Examination.—The Irish Preliminary is not in the list of examinations approved by the British Society, but you should submit the certificate to the Council, who will take the advice of the Board of Examiners as to whether the certificate you possess can be accepted.

138/67. *P. A. T.*—The Pharmaceutical Society's school is the only one in London which is recognised for the full curriculum of the Irish Society. The Irish Licence examination is not very different from the present Minor examination. Irish assistants need not necessarily have passed the assistants' examination. Refer to the last Educational Number (September 7, page 419) for full particulars.

140/62. *H. H. H.*—(1) Dry Shampoo:—

Sapo. castil. alb. ...	...	...	5j.
Ol. lavand. ...	...	...	5j.
Spt. rectificat. ...	...	...	5viij.
Aquæ ...	...	...	5iij.

Macerate for a day or two, filter, and add—

Liq. ammon. ...	...	...	5j.
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M.

(2) Jaborandi Hair-wash:—

Quinina sulph. acid. ...	...	...	9j.
Tr. jaborandi ...	...	...	5j.
Aq. coloniensis ...	...	...	5iij.
Glycerini ...	...	...	5j.
Spt. myrciæ ...	...	...	5iij.
Aq. rosæ ...	...	...	5xj.

Mix, and after four hours filter.

270/19. *E. J. L.*—(1) Camphor dissolved in the paraffin, with the addition of a strong-smelling essential oil such as verberna, is a method of improving the odour of paraffin (2) Solidifying Paraffin—There are three ways of doing this—(a) by means of soap; (b), with vegetable saponifiers; (c) with other substances such as gelatin. In the soap method 9 oz. of ordinary burning oil is heated with 1 oz. of stearic acid in a water-bath, aqueous soda added to neutralise, and the liquid agitated with an egg-whisk until it sets. If sodium silicate or sodium aluminate is added in place of soda harder jellies result. Quillaia is an example of the vegetable saponifiers used in the second method. Five per cent. of the ground bark is added to the petroleum, then 5 per cent. of water, and the mixture agitated till a jelly results. Gelatin, albumen, casein, and Ghatti gum required in the third process give indifferent results compared with the other methods.

8/7. *O. K. R.*—Studying for the Major.—In the Educational Number of the *C. & D.*, published September 7, you will find information as to the books required for Major study. Taking the classes you propose, and with home study, there is no reason why you should not easily master the subjects.

111/65. *Manx.*—Waterproofing-cloth.—The method you refer to consists of the deposition of lead sulphate in the fibres of the cloth. The garment is first dipped in a solution of lead acetate, and afterwards in a solution of a sulphate, sodium sulphate, for instance. A dip in a weak glue solution after the lead bath is beneficial. A modification of the above process is described in the *C. & D.*, August 26, 1899, page 377.

124/20. *G. B. & Co.*—Gelatin-cement:—

Gelatin ...	...	...	5vj.
Acetic acid ...	...	...	5iv.
Water ...	...	...	5iij.
Alum ...	...	...	5ss.

Heat together for six hours, skim, and add—

Rectified spirit ...	...	...	5j.
----------------------	-----	-----	-----

Mix.

122/11. *Emulsion.*—(1) The furniture-cream formula would be improved if the quantity of castile soap were reduced by at least $\frac{1}{2}$ oz., otherwise the recipe is a good one. (2) The superior whiteness of factory-made cod-liver oil emulsion is due to the use of emulsifying machinery. You cannot have a better formula than the one you are using.

146/28. *N. H.* (India).—"Acid magenta" is a colour which stands the addition of acids without change, and it is fairly permanent to light.

147/24. *Apud.*—Moist Sterile Gauzes are said to owe their moistness to an excess of glycerin, but we have no exact formula for their preparation.

146/32. *Cotton.*—Silky Lustre on Cotton.—This is produced entirely by mechanical means. Rollers with a large number of fine parallel lines (about 250 to the inch) are passed over the fabric at a great pressure and high temperature. If you are interested in the process you should consult patents 7,637 of 1895 and 19,633 of 1893.

139/50. *J. E. S.*—(1) Syr. Rubi Aromaticus:—

Blackberry-bark ...	...	...	4½ oz.
Cinnamon ...	...	...	½ oz.
Nutmeg ...	...	...	½ oz.
Cloves ...	...	...	¼ oz.
Allspice ...	...	...	¼ oz.
Sugar ...	...	...	20 oz.
Proof-spirit ...	...	...	q.s.
Blackberry-juice ...	...	...	q.s.

Make 35 oz.

The first five ingredients are reduced to powder and percolated with proof-spirit till 10 oz. of percolate is obtained. Add to this 15 oz. of blackberry-juice and dissolve the sugar by agitation in the liquid. Lastly, add enough blackberry juice to make up the volume to 35 oz.

(2) We are inquiring.

136/60. *L. D.*—Iridescent Gelatin.—We have not been able to obtain further information on this subject, but will keep your inquiry in mind.

24/25. *J. S.* (Detroit).—The account of a visit to the Pharmacie Centrale, Paris, appeared in the *C. & D.*, January 31, 1891, a number which is long ago out of print. It could probably be obtained by advertising in the coloured supplement.

134/52. *F. W. M.*—Formulas for Kidney-pills were given in the *C. & D.*, September 28, 1901, page 553, and July 28, 1900, page 219.

131/66. *Electric.*—Books on Elementary Electricity.—Thompson (S. P.), "Elementary Lessons in Electricity and Magnetism," 4s 6d (Macmillan). Jenkin (F.), "Electricity and Magnetism," 3s. 6d. (Longmans).

134/71. *S. W.*—The process used for Darkening Oak is, first to soak the wood in solution of ammonia and then cover with lime wash and allow to dry. Fumigating oak with ammonia is also a very common practice amongst antique-furniture makers.

135/2. *Fotographer.*—The quantity of Gold-chloride Solution (1 gr. in 1 dr.) made from a sovereign is 30 oz 2 dr. A sovereign contains 113 gr. of pure gold, equal to 242 gr. of gold chloride.

135/18. *C. E.*—Soldering-fluid.—The following method produces a non-corrosive fluid:—Take a quantity of commercial quality hydrochloric acid and add granulated zinc till all action ceases, conducting the operation in the open air. Filter the solution and dissolve in each pint 2 oz. of sal ammoniac.

135/32. *Phenazone.*—Water-softening.—This is managed on a large scale by adding milk of lime to the water in a reservoir. The lime neutralises the excess of carbonic acid in the acid carbonate of lime present in the water, forming the normal carbonate which is precipitated and settles to the bottom. We are assuming that the hardness is "temporary" if "permanent" alkaline-salts are used, but are not available if the water is used for drinking-purposes.

131/49. *S. A.*—Coal saver.—This is the usual thing—common salt—coloured with bole. What the makers say about saving coal, by producing more heat with less fuel, is rubbish.

117/66. *Daturine.*—The herb you send, used for asthma, is mainly coltsfoot. There is no stramonium present as far as we can judge.

119/50. *Spray.*—The American Throat-spray which possesses "wonderful powers in relieving attacks of asthma" is a solution of cocaine hydrochloride of approximately 3-per-cent. strength. The responsibility of a chemist who supplies such a preparation, except on a medical prescription, is very great. It is a Part 1 poison.

115/65. *R. R. K.*—(1) The manner of using logwood-chips for restoring black fabrics is to boil the chips with water and rub the strained decoction on the coat or dress with a piece of flannel previously treated in the same way with copperas solution. (2) The sample of benzine you send seems to be discoloured, and smells stronger than usual. (3) Toilet-lanolin:—

Rieger's almond soap	...	...	5j.
Distilled water	...	...	5j.

Dissolve by heat and mix with

Lanolin	...	...	5j.
Glycerin	...	...	5j.

Use a warm mortar for the mixing, and perfume with rose and neroli.

147/1. *W. A.*—Cashew-nut juice has been used for uterine complaints and as a diuretic, so that it is probable that the liquid extract possesses like medicinal properties. The dose is small.

147/4. *Statin.*—Books for the Minor.—Refer to *C. & D.* Educational Number, September 7, page 418. The "Tutorial Chemistry" is good, but does not cover the whole range of Minor chemistry.

147/53. *A. H.*—As explained in the *C. & D.*, May 18, 1901, page 811, tables of alcohol strengths are the result of actual experiments owing to the unorthodox way mixtures of alcohol and water have of contracting, and that unequally at varying temperatures. You could consult the alcohol tables in Thorpe's "Dictionary of Applied Chemistry" at most good reference libraries.

146/59. *Perfume.*—Fumigating Pastilles.—As you wish to have a pastille without incense odour (due to benzoin and tolu) the following may suit you:—

Sandalwood, in powder	...	...	5j.
Cascarilla, in powder	...	...	5j.
Vegetable charcoal	...	...	5j.
Vetivert	...	...	5j.
Lavender flowers	...	...	5iv.
Potassium nitrate	...	...	5iv.
Oil of thyme	...	...	5ss.
Oil of rose	...	...	5ss.
Mucilage of tragacanth	...	...	q s.

Make into a stiff paste, divide into cones, and dry.

132/21. *Ego.*—The Caulking-composition for placing in the cracks between the boards of the deck of a ship is resin melted with a small proportion of tallow and Venice turpentine.

119/23. *W. B.* (Paris). The Paste Dentifrice is similar to the following:—

Powdered white soap	...	...	5j.
Powdered orris root	...	...	5j.
Precipitated chalk	...	...	5iv.
Powdered sugar	...	...	5ss.
Oil of peppermint	...	...	℥viii.
Oil of rose-geranium	...	...	℥x.
Solution of carmine	...	...	q s.
Glycerin	...	...	5vj.
Rose-water	...	...	sufficient to make a paste

It is the soap that gives the smooth taste you refer to, and it may be doubled if thought desirable.

132/23. *Agricola.*—Scour-mixture for calves, which "effects a speedy cure":—

Pulv. cretæ præp.	...	...	5j.
Pulv. cort. quercus	...	...	5j.
Ess. menth. pip.	...	...	5iv.
Aque ad	...	...	Qj.

Dose: Two tablespoonfuls, mixed with gruel, once daily.

128/50. *Munad.*—The Furniture-cream could probably be brought round by separating the solid portion, melting in a water-bath, and mixing in the liquid portion previously incorporated with more soap.

118/61. *Belgravia*—Poulterers' Powder.—This consists of boric acid 3 parts, borax 1 part. It is used for dusting on fowls after plucking, as a preservative

133/17. *Phenique*—Liquid Carbolic Dentifrice as your sample:—

Pulv. cort. quillaiæ	...	...	5iv.
Pulv. cocci	...	...	5j.
Ac. carbolicæ	...	...	5ij.
Saccharini	...	...	gr. v.
Ol. cinnamomi	...	...	℥xv.
Ol. menth. pip.	...	...	℥xxx.
Spt. vini rect.	...	...	5xiiss.
Aque	...	...	5xiiss.

Macerate seven days, filter, and make up to 25 oz. with proof spirit.

117/65. *Poultry.*—(1) Roup-powder.—The following is an improvement on the powder you send:—

Potassii nitratis	...	...	5j.
Pulv. cubebæ	...	...	5j.
Pulv. lini	...	...	5x.
Pulv. glycyrrh.	...	...	5iv.

Mix a tablespoonful with the food for ten fowls.

(2) Poultry-powder to increase the yield of eggs.—Your sample lacks the spices which are necessary in such a powder. The following is a good preparation:—

Pulv. piper. nig.	...	...	5i.
Pulv. anisi	...	...	5ij.
Pulv. calcii phosph.	...	...	5ij.
Pulv. lini	...	...	5xij.

Mix a tablespoonful with the food for ten fowls.

148/13. *T. G. Forshaw*—Thanks; but the note merely repeats what has already been said about opodeldoc. It would have been interesting a month ago.

148/51. *T. C. S.* (Liverpool).—When you write letters for publication, you should give your full name and address, and not write on both sides of the paper.

123/40. *Zylo.*—(1) Kola-syrup used for kola drinks always produces froth. You do not say what formula you use, but the recipes in THE CHEMISTS' AND DRUGGISTS' DIARY, 1900, may give you hints as to improving it. (2) Billiard-cue cement:—

Isinglass	...	...	5j.
Distilled water	...	...	5ij.

Soak and dissolve, then add the following solution very cautiously:—

Ammoniac or sandarac	...	...	5ss.
Rectified spirit	...	...	5ij.

120/60. *R. J. W.*—Spirit-gum—The formula in "Pharmaceutical Formulas"—resin (1 oz.), castor oil ($\frac{1}{2}$ oz.), spirit (4 oz.)—is the usual one, but you can modify it by either increasing the resin or decreasing the castor oil.

114/58. *J. H. W.*—The only way out of the label difficulty is to have the labels supplied ungummed and stick them on the syphons with paste. There is no gum that will stand damp climates.

Information Wanted.

Postcard replies to any of the subjoined inquiries will be esteemed.

- 150/30. English agents for Antiphlogistene.
 154/12. Who puts up Chevalier's perfumes?
 155/45. Where can "Sarsaparilla de Bristol" be obtained?
 155/26. What is pyrazone, or, if proprietary, who makes?
 155/8. Makers of Chapman's rose wafers, or where obtainable?
 150/61. Makers of sponge felt, a substitute for spongiopiline.
 19/19. English agents for Dazzle-Putz (Miller Bros. & Co., New York).
 58/33. Is there any machine on the market for automatically folding powders, if so, where can it be obtained?

Doctoring the Poor.

IT is impossible to withhold a certain admiration for Mr. J. C. Purdue, the East-End herbalist and *bête noir* of Coroner Wynne Baxter. His persistence and obviously honest conviction of the rectitude of the path he has chosen commend him to the British love of doggedness and fair play. And especially to chemists must his persistence appear creditable, for many of the craft have known what it is to feel the rasp of a coroner's tongue when they dared to sell twopennyworth of cough-mixture to relieve the child of the poor woman who could not produce the doctor's sixpence. Last week (*C. & D.*, February 15, page 251) we recorded Mr. Purdue's seventh appearance before Mr. Wynne Baxter, and we have this week to record his eighth. A child died of burns, and Mr. Purdue was called in, the mother being quite aware he was not a doctor. The Coroner, therefore, could not work off his usual lecture "Well, the mother knew you were not a doctor," he said to Mr. Purdue; "so there is nothing to say. At the same time, it is essential for the welfare of the public that it should be known." "I don't profess to be a doctor," retorted Mr. Purdue, as he handed the Coroner the following bill, which he distributes broadcast in the neighbourhood:—

A GREAT BLESSING FROM GOD TO HIS PEOPLE IN
EAST LONDON

IS THE

Herbal Dispensary,

7 GALT STREET, LIMEHOUSE, LONDON, E.

FOUNDER AND LEADER:

J. C. PURDUE,

Member of the National Association of Medical Herbalists of Great Britain, 1861.

Fellow of the Council of Safe Medicine, London, 1893.

Member of the Medical Herbalists Protection Association of Great Britain, 1894.

The above Herbal Dispensary is open every Monday, Tuesday, Wednesday, Thursday, and Friday mornings from 8 till 12, when the Public get advice and Herbal Medicine for 1*d.* Attendance with Herbal Treatment at own Residence from 6*d.*

No charge for visiting.

Not a Doctor, Providence has decreed otherwise,
only a 1*d.* Herbalist.

No needful or penniless person ever refused treatment.
Over 42 thousand persons have been already successfully treated.
No Funds, Gifts, Presents, or Testimonials ever asked for.

"Whatsoever a man soweth, that shall he also reap."
Gal. 6, 7.

A *C. & D.* representative explored the unsavoury neighbourhood of Limehouse the other day until he chanced on Galt Street. No. 7 is a small shop of the typical herbalist stamp, and it betrayed no gaudy air of prosperity. A stone pestle and mortar were posed on one counter, and Mr. Purdue himself was engaged in making a batch of pills. The *C. & D.* emissary introduced the subject of coroners, Mr. Purdue cheerfully gave his views thereon, and also furnished his opinion of doctors with the utmost abandon.

"What I say is this," said Mr. Purdue, "if a poor man, woman, or child be sick, and any chemist, herbalist, or chimney-sweep can give something for their relief or cure, why should the doctors and their henchmen the coroners try to stop it?"

"But they say we have no skill and know nothing of disease," said the interviewer.

"Skill!" retorted the interviewer scornfully; "you should see some of the cases that come under my notice daily. Now, I'll tell you of one case that happened not very long ago. A poor woman in this neighbourhood was attended for six months by two doctors for rheumatism of the knee. Eventually I was called in and found that the woman's thigh

was dislocated! I said so, the doctors were told on their next visit, and, strange to say, they acknowledged that the herbalist was right and they were wrong. The woman was sent to the infirmary, and is now able to walk."

The most incredible portion of this story appeared to the interviewer to be the doctors' acknowledgment. Other cases were cited by Mr. Purdue of snatching physician-forsaken sufferers from the grave, but the foregoing will suffice.

In the course of further conversation, Mr. Purdue mentioned that he had been ten and a half years practising as a herbalist in the neighbourhood. He came from the country, and he asserts that but for the "persecution" to which he has been subjected he would have given in long ago. This "persecution" has acted as a stimulus to his efforts.

"I am doing the Lord's will on earth," said Mr. Purdue, "and these people [doctors and coroners] are trying to stop me; but they can't."

On one occasion he was fined at the instance of the Apothecaries' Society. He was called up in the middle of the night to see a child. He found it almost choking from diphtheria and did what he could, but the child died, and he was fined "for illegally practising as a physician."

The shop is characteristic of the man. Up till 12 o'clock daily, two large placards outside the door intimate that "advice and herbal medicine" will be given to all-comers for 1*d.* After 12 the ordinary mixture costs 6*d.* On the shop-door is the certificate of the "Medical Herbalists' Protection Association of Great Britain." Other framed certificates hang inside, and there is also a framed letter headed "Crown's Law," which appeared in a recent issue of a London morning newspaper. In appearance Mr. Purdue betrays by bristling moustache and imperial, and keen dark eyes, the individual who will not be sat upon with impunity, and with all respect to Mr. Wynne Baxter we are inclined to think the herbalist does more good than harm.

Trade-Marks Applied For.

(From the "Trade-marks Journal," February 19, 1902.)

"PYROPHAN"; for photographic chemicals. By Farbenfabriken vorm. F. Bayer & Co., Koenigstrasse 27, Elberfeld, Germany. 241,892.

"GLYCOPENPHENE" (no claim for "Glyco"); for medicines. By the Henry Heil Chemical Company, 212 South Forth Street, St. Louis, Missouri, U.S.A. 242,067.

"COLCURA"; for a medicine. By T. S. Rendall, 76 Fleet Street, Torquay. 242,274.

Design representing Oannes, the fish-deity of the Chaldeans; for chemicals and food-stuffs. By Burroughs Wellcome & Co., Snow Hill Buildings, E.C. 242,324 and 242,325.

Picture device; for dyes and colouring-matters. By the Basle Chemical works, Neuhausweg 90, Basle, Switzerland. 240,885.

"SIGHTOPTIST"; for goods in Class 8. By J. J. Wood, 20 Lord Street, Liverpool. 243,128.

"DALOX"; for photographic paper. By J. J. Griffin & Sons (Limited), 26 Sardinia Street, Lincoln's Inn Fields, W.C. 243,124.

Picture of a charging bull; for salt. By the Salt Union (Limited), 45 Tower Buildings, Liverpool.

Facsimile signature of the firm (the essential particular); for a baking-powder. By J. Griffiths & Son, 24 Womanby Street, Cardiff. 242,525.

Combination of devices and the words "SHIELD" and "VASE" (essential particulars); for soups in powder and blocks, meat extracts, and cocoa preparations. By Solid Soup (Limited), 146 Wednesbury Road, Walsall. 242,559.

"RAMOGEN" (no claim for "Ram" or "Rahm"); for condensed milk. By A. Lauer, Zwingenberg an der Bergstrasse, Hessen, Germany. 242,877.

Device of Southampton Bargate (the essential particular); for food-stuffs. By Misselbrook & Weston, 15 The Strand, Southampton. 243,369.

"SCRUBBO"; for soaps (dry and in powder) and a polish. By Lever Brothers (Limited), Port Sunlight. 242,272 and 242,273.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C.: February 20.

BUSINESS shows no improvement, and no important changes have taken place this week. Quinine continues very quiet, and is, perhaps, a shade firmer. Menthol is slightly easier than when we last quoted. Tartaric acid has a hardening tendency, but citric acid is very quiet. Cannabis indica continues to sell at previous rates, but values must eventually be higher, as the Indian export-duty has been increased. Ergot is quiet and neglected. Saffron remains very firm, but unchanged. Italian castor oil has been in more demand at firm rates, and in eucalyptus oil there has been a good business at the low figures lately ruling. The following are the principal alterations of the week, including those recorded at the drug-auctions:—

Higher	Firmer	Easier	Lower
Acid, carbolic	Cardamom-seed	Acid, citric	Asafetida
Antimony	Quinine	Buchu	Cardamoms
Benzoin (Siam)		Ipecac. (Car-tag. and Rio)	Chillies
Juniper-berries		Menthol	Sarsaparilla (Jamaica)
Oil, cod liver shellac		Pepper (black)	
Wax, bees', Jamaica			
Wax, bees', Madagascar			

Arrivals.

The following drugs, &c., have arrived at the principal ports of the United Kingdom from February 13 to 19, inclusive:—Acid, oxalic, 26; acid, tartaric (@ Bari) 77 pkgs., (@ Rotterdam) 12 kgs., (@ Bordeaux) 18; argol (@ Naples) 125 cks., (@ Cape) 34; arrowroot (@ Natal) 55 cs., (St. V.) 229; arsenic (@ Oporto) 103 brls., (@ Hamburg) 10; "balsams" (@ Hamburg), 6; bleaching-powder, 25; buchu, 40; camphor (@ Hamburg), 60 tubs; caraway-seed, 100; castor oil (E.I.) 20, (Belg.) 100, (Ital.) 44; cinchona (Ceylon) 37 bls., (African) 50; citronella oil (@ Galle), 35; cloves (@ Hamburg), 1,353; cocaine, crude (@ Callao), 13; cod-liver oil (@ Bergen), 95; coriander-seed, 22; cream of tartar (@ Bordeaux) 164, (@ Rotterdam) 53, (@ Tarragona) 10; drugs (@ Trieste) 99, (@ Fiume), 76; essential oils (@ Messina) 78 pkgs., (@ Palermo), 9; eucalyptus oil (Aust.), 10; fenugreek-seed, 19; ginger (@ Jamaica) 176 pkgs., (@ W.C.A.) 219, (@ Bombay) 99 cs. 981 bgs. 423 bls.; gum arabic (@ Aden) 64 cs.; (@ Alexandria) 117 bgs. 173 pkgs.; gum thus, 200; gum tragacanth, 15; honey (Jam.), 11; juniper berries, 377; lime-juice (W.I.), 18 brls.; mustard oil, 20; nux vomica (@ Madras) 270, (@ Bombay) 40; olive oil (@ Messina) 73 brls., (@ Bari) 21 bxs., (@ Zante) 168 pkgs. 67 cks., (@ Leghorn) 1,729 pkgs.; opium (@ Genoa) 50, (@ Bombay) 23; orris (Ital.), 14; palm oil (@ Hamburg) 184 cks.; pepper (@ Havre), 200; pimento, 164 bgs.; potash chlorate (@ Antwerp) 40 kegs., (@ Gothenburg) 100; quicksilver (Ital.), 100; rose oil (@ Madras) 11, (@ Bombay) 3; saccharin, 7; sandalwood, 185 bls.; sarsaparilla (@ New York) 30 pkgs., (@ Hamburg) 6 bales; senna (@ Madras) 13 bls. (@ Bombay) 173; sulphur (@ Catania), 40 pkgs. 700 bgs. 50 t.; sugar of lead, 51; tamarinds (E.I.), 30; tartar (@ Bordeaux), 102; vanilla (@ Colombo), 6 cs.; wax, bees' (@ Aden) 53 pkgs., (Mor.) 66, (Ital.) 2, (Jam.) 7; wax, ceresin 60, (@ Dusseldorf) 70; wine lees (@ Messina) 603 bgs., (@ Palermo) 131 bgs.

Commercial Sale-rooms Benevolent Fund.

The annual meeting of the London Commercial Sale-rooms' Benevolent Fund was held on February 17 in No. 3 Sale-room, Mr. W. Murray Guthrie, M.P., presiding. The report for 1901,

which was taken as read, stated that 163 new annual subscriptions, amounting to 208l. 19s. had been received. There was also an increase of 28l. 7s. in the subscriptions of previous subscribers, and the donations amounted to 380l. There was also a recovery of overdue subscriptions to the extent of 21l. During the year one of the recipients had died, while four fresh applicants had been accepted, the number on the books at present being twenty-two. The total amount granted had exceeded 880l., against annual subscriptions amounting to 873l. The Chairman, in moving the adoption of the report and balance sheet, referred to the long connection of his firm with Mincing Lane—over one hundred years—during which time their relations with the brokers had always been of a most cordial nature. It was the duty of the merchants and brokers to support the Benevolent Fund, and he asked those who were already subscribers to convince others of the necessity of also becoming subscribers. The report was unanimously adopted, after which the following auditors were elected:—Mr. Coventry A. Woodhouse (in place of Mr. H. Gülich), Mr. W. Swanborough, and Mr. Stephen S. Duval. The following members were re-elected to serve on the committee:—Messrs. J. A. Browne, Henry Devitt, W. W. Green, and F. G. Naumann. Mr. Samuel Figgis proposed a vote of thanks to the committee, and Mr. H. W. Price replied, alluding to the success and encouragement they had met with, and their endeavours to administer the fund with economy and justice. Mr. R. N. Dalton proposed a hearty vote of thanks to the Chairman, who, he said, in addition to becoming an annual subscriber, had presented the Fund with a handsome donation, which he hoped would bear fruit in other directions. Mr. Price, in seconding, said the fund was now larger than at any time during its twenty years' existence, but in order to prevent any undue elation he regretted to say that, owing to the natural and somewhat sad increase of annuitants, the payments were more than their annual subscriptions, so that he earnestly hoped others would come forward and assist.

Heavy Chemicals.

The general tone in the heavy chemical market is a steady one, and there is little of change or of special importance to be reported. Home trade demand keeps fairly good, and about an average one, but exports are only quiet. It is rather early on in the year, however, for much being done in shipments. Deliveries against existing contracts are being taken fairly well. Values for the most part are maintained.

SULPHATE OF AMMONIA.—There is a fair continued demand, and good all-round business has been done, but in spite of this the tone is scarcely so firm as it was, although at the time of writing values are nominally unchanged. Beckton February-June delivery, 11l. 10s.; Beckton terms, 11l. 7s. 6d.; Hull, 11l. 7s. 6d.; London and Leith, 11l. 8s. 9d. Exports from Leith last week were heavy, amounting to 1,593 tons.

ALKALI PRODUCE.—Caustic soda is steadily maintained at unchanged rates, but demand is not very brisk: 76 to 77 per cent., 10l. 7s. 6d. to 10l. 15s.; 70 per cent., 9l. 15s. to 10l. per ton; 60 per cent., 8l. 15s. to 9l. per ton. Bleaching-powder is moving off better, and is also steady, at 6l. 15s. to 7l. per ton, f.o.b. Tyne or Liverpool, for hardwood, and 6l. 7s. 6d. to 6l. 12s. 6d. per ton, free on rails, for softwoods. Ammonia alkali continues to maintain a very firm tone and to move briskly, at 4l. 5s. to 4l. 15s. per ton for 58 per cent., free on rails, in bags. In chlorates, both potash and soda, there is not very much doing, but prices rule fairly firm, at 3d. and 3½d. to 3½d. per lb. respectively. Soda crystals without change, at 67s. 6d. per ton, f.o.b. Liverpool, and 62s. 6d. per ton, f.o.b. Tyne. Yellow prussiate of potash, 5½d. to 5½d. per lb. for best Lancashire makes. Saltcake still quiet, at 25s. to 26s. per ton, in bulk, free on rails. Bicarbonate of soda in fair request, at 6l. 7s. 6d. to 6l. 12s. 6d. per ton, in large casks, and 6l. 15s. to 7l. per ton, f.o.b. Liverpool, in 1-cwt. kegs. Sulphate of soda (Glauber's salts) steady, at 30s. to 32s. 6d. per ton, free on rails, in bags. Hyposulphite of soda in moderate request only, and values still rule low: 6-8-cwt. casks, 5l. 10s. to 5l. 17s. 6d. per ton, and 1-cwt. kegs, 6l. to 7l. 5s. per ton, according to quality. Silicates of soda in fair demand, both for home and export; 140° Tw., 4l. 2s. 6d. to 4l. 12s. 6d. per ton; 100° Tw., 3l. 12s. 6d. to 4l. 2s. 6d. per ton; 75° Tw., 3l. 5s. to 3l. 15s. per ton, f.o.b. Tyne or Liverpool, in usual casks.

Liverpool Drug Market.

Liverpool, February 19.

CASTOR OIL.—The market continues to exhibit few features of interest in consequence of the small demand from consumers. Good seconds Calcutta is obtainable at 3½d. to 3½d. per lb. First-pressure French is still held for 2½d. to 3½d. per lb.

BEEWAX.—At auction and by private treaty 12 bags of Peruvian have been sold at 7l. 2s. 6d. to 7l. 10s. per cwt., ranging in quality from grey to pale primrose.

GINGER (AFRICAN).—101 bags of Sierra Leone of new crop have been sold at 32s. per cwt., in transit.

GUM, ACACIA.—Twenty serons of hard amber sorts have been

reported sold at 33s. 6d. per cwt., and further arrivals are recorded this week, chiefly of hard amber and Ghezirah description.

TURPS is steady on the spot at 31s. per cwt., with very little business passing.

LINSEED OIL has established an advance, and 33s. to 33s. 6d. per cwt. is now quoted, according to quality.

COPPER SULPHATE.—Steady at 20l. per ton, with a fairly good inquiry.

ARSENIC.—White powdered is firmly held at 15s. per cwt.

TONKA-BEANS.—A recent arrival of 2 cases foxy to black Para is reported sold at 1s. 3½d. per lb.

GRAINS OF PARADISE.—The small remaining stock is held firmly at 70s. per cwt. Importers say that no more are likely to come forward.

German Drug Market.

Hamburg, February 18.

Our drug-market is quiet in general, only a few articles meeting with interest.

ALOE.—Cape is firm, at 76m. per 100 kilos.

AGAR-AGAR is quiet and lower, spot being quoted 360m. to 350m., and forward delivery, 330m. per 100 kilos.

BALSAM PERU remains very firm, at 13½m. per kilo.

CONDURANGO-BARK shows a strong advance, and 120m. to 125m. per 100 kilos. is now asked.

CAMPHOR (REFINED) is still unchanged, at 435m. from refiners, second-hands quoting a little less.

CUMIN-SEED (Maltese) is quoted 52m. per 100 kilos.

ELEMI.—Manilla is lower, at 225m. per 100 kilos.

LYCOPODIUM shows a strong market, at from 437½m. to 440m. per 100 kilos.

IPECACUANHA is quiet, Rio being quoted at 22½m. to 22m., and Cartagena, 11m. to 10½m. per kilo.

MENTHOL is quiet and lower, at 33m. to 29½m. per kilo.

JALAP is quoted 110m. per 100 kilos.

QUININE is unchanged, at 39m. per kilo.

SENEGA is offering at 500m. to 490m. per 100 kilos., but the demand is only small.

JAPANESE WAX.—Forward delivery is quoted at 67m. per 100 kilos.

WORMSEED continues very firm, green seed being held at 80m. to 85m., and brown seed, 63m. to 65m. per 100 kilos.

VANILLA.—Tahiti is firmer, 11m. per kilo. having been paid.

OILS (FIXED).—Cod-liver is unchanged, at 70m. per barrel. Castor oil is advancing and shows a better demand, first-pressing in barrels spot is now 55m. per 100 kilos. Linseed has advanced considerably and a large business done for near delivery. Cotton-seed firm. Palm steady.

OILS (ESSENTIAL).—Star-anise is unchanged, at 10½m. per kilo. HGH Peppermint is quoted 8.60m. per lb., and Japanese, 8m. to 8¼m. per kilo.

American Drug-market.

New York, February 11.

The market is quiet, but business generally is good, and there is no pressure to realise. Demand is almost wholly for purposes of consumption.

BEESWAX.—Supplies are coming forward very slowly, and with an improving demand the market is strong, with an upward tendency. Ordinary pure yellow is offered at prices ranging from 29c. to 35c. per lb.

BALSAM COPAIBA.—Quotations are nominally unchanged, but only inferior goods are obtainable below 35c., while sales for export have been made up to 37c. Business is not brisk, as dealers will not sell at present prices.

CUBEBS are almost neglected, and whole berries are obtainable at 10c.

COCOA-BUTTER in bulk has declined to 31c., and the market is dull. In quantity less than this would buy.

COD-LIVER OIL is firmer, with the best brands held at \$22-50.

ERGOT is dull at 39c. for Russian, and 40c. for Spanish.

JAPAN WAX.—Arrivals have eased the market, and 7½c. will buy.

JALAP.—Demand is very poor, but owing to the limited available supplies quotations remain firm at 12c. to 13c.

GOLDEN SEAL (Hydrastis).—Spot quotations are 50c. for good quality, but quotations for various grades are somewhat irregular.

IPECACUANHA is easy at \$2.50 for Rio, and \$1.40 for Cartagena.

BUCHU-LEAVES.—Prime green short leaves are selling at 18c., but the market is very quiet and depressed.

MANDRAKE-ROOT is firm under the influence of a good demand, and 4½c. is asked for good quality root.

SENEGA is in better demand, but sales are few, as holders are inclined to ask higher prices.

OPIMUM continues weak, and cases are obtainable at \$2.97½.

BENZOLIN.—Sumatra is scarce and generally higher for all grades. Quotations range 30c. to 40c., according to quality.

TRAGACANTH.—Aleppo is in good demand, but values are unchanged at 70c. to 75c. for first quality, and 55c. to 65c. for seconds.

Cablegrams.

SMYRNA, February 19:—The sales for the week ending Wednesday amount to 40 cases, including current talequale at the equivalent of 7s. 7d. per lb., f.o.b., and Yerli at 8s. Market closes steady.

HAMBURG, February 20:—Business here is quiet. Castor oil is firmer; ergot of rye is steady, and higher prices have been paid for condurango bark.

BERGEN, February 20, 1.15 P.M.:—The prospects for the fishing are not very promising at present, and 75s. per barrel, f.o.b. Bergen, is now asked for new non-congealing Lofoten oil. The total catch of cod to date amounts to 2,240,000, against 2,867,000 last year. This is estimated to produce 1,302 barrels, against 2,771 barrels at the same time last year.

NEW YORK, February 20:—Business here is brisk. Opium is quiet at \$2.95; balsam copaiba is advancing, and 36c. is now asked. Buchu-leaves are easy at 18c.; Damiana-leaves are higher, 15c. being to-day's price. Cubebs are easy at 9½c., and ergot is lower at 38c. Balsam tolu has declined to 26c. per lb., and cinchonidine is slow of sale at 25c. per lb.

London Markets.

ACID, CARBOLIC, is higher, 39° to 40° C. crystals being quoted 6½d. to 6¾d., and 34° to 35° C. 6¼d. per lb. Crude 75 per cent. is 2s. 3d. to 2s. 3½d., 60 per cent. 1s. 10½d., and 50 per cent. 1s. 6¾d. to 1s. 7d. per gal.

ACID, CITRIC.—Makers quote English crystals at 1s. 1d. per lb., nominally, and for foreign make 1s. 0½d., c.i.f., is asked.

ACID, TARTARIC, is hardening. Foreign crystals or powder is quoted 10½d. per lb., and makers of English quote 11½d.

ANTIMONY is dearer, English now being quoted 32l. to 33l. per ton.

ARROWROOT.—At auction on Wednesday fine St. Vincents was bought in at 3d. per lb., and fair to good at 1½d. to 1¾d. Bermuda was bought in at 1s. 5d. per lb.

BALSAM PERU.—A report from Berlin states that the syndicate which was established in San Salvador a few months ago have advanced their prices 1m. per kilo., and the tendency is still upwards.

CAMPHOR.—In Japanese crude camphor a sale of 200 piculs is reported at 151s. 6d. per cwt., c.i.f., for February-March shipment. Pressed is quoted 177s. 6d.

CANNABIS INDICA.—The export duty has recently been raised by the Indian Government from 2s. to 2s. 8d. per lb. The stock on the spot is being slowly reduced, although there is still a fair amount available, and we understand there have been no imports since the duty was imposed. Values are unchanged at 2s. 3d. for tops and 2s. for siftings, and business has been done at these figures this week.

CINCHONA.—The shipments from Java for the first half of the month amounted to 320,000 Amsterdam lbs., against 525,000 in 1901 and 180,000 in 1900. At the cinchona-auctions to be held at Amsterdam next week the equivalent of 36,901 kilos. quinine sulphate will be offered. The manufacturing bark contains an average percentage of 5.27 per cent. q.s. against 5.46 per cent. at the January auctions, and an average of 5.45 per cent. for the ten auctions of 1901. In the drug-auction 2 serons of small Huanoco quill realised 6¾d., and 12 serons Loxa quill sold at 1s. 2d. to 1s. 5d. per lb.

COCOA-BUTTER.—The auctions to be held in Amsterdam on March 4 will consist of 80 tons Van Houten's, 13 tons de Jong, 4 tons Helm, 5 tons Mignon, and 5 tons of a foreign brand, while on the same date in London 90 tons Cadbury's brand will be offered.

ERGOT is neglected, at 1s. 5½d. per lb., c.i.f., for Spanish.

INSECT-FLOWERS.—The following are the latest quotations from Trieste:—For good half and three-quarter closed flowers, 115s. to 120s.; fair half-closed, 100s. to 105s.; good open flowers, 80s. to 90s., c.i.f.; genuine powder from half-closed flowers, 1s. 3d. to 1s. 5d. per lb., according to quantity, and

9d. to 1s. for lower grades. The Trieste market has again advanced during the past few days, and stocks are much smaller than at the same time last year.

JUNIPER-BERRIES are firmly held and comparatively scarce. For a parcel just landing 11s. 6d. per cwt. is quoted as the spot-price.

MASTICH is very quiet at from 1s. 4d. to 1s. 7d. per lb. for clean pale tear. An importer quotes 1s. 1½d. per lb., c.i.f.

MENTHOL.—Very quiet, with small sales of case lots of Kobayashi crystals at 13s. 9d. per lb., spot. There is a quotation in the market of 12s. 9d., f.o.b. Hamburg, for a parcel near at hand. Another importer quotes 12s. 10½d., c.i.f., for January-February shipment.

MORPHINE is fairly steady at from 4s. 4d. to 4s. 5d. per oz. for muriate powder, according to quantity.

MUSK.—The exports from Shanghai from January 1 to December 31 (in catties) have been:—

	Paris	London	New York	Hamburg	Total
1901	599	154	314	105	1,172*
1900	790	43	219	52	1,104
1899	873	180	290	148	1,491
1898	1,105	231	103	308	1,747
1897	887	475	583	127	2,072
1896	729	555	393	125	1,802
1895	686	465	334	191	1,676
1894	884	648	255	130	1,917
1893	723	697	357	192	1,969

* About 90 per cent. Tonquin and 10 per cent. Sawko and Tampi.

A tin of Cabardine sold at 11s. 6d. per oz. in auction.

NUX VOMICA.—A report from Calcutta dated January 30 states that no important sales have transpired during the fortnight; arrivals and stocks are very small, and a retail business has been passing at steady rates—viz., 2 12r. to 30r. per British maund, loose.

OIL, CASTOR.—Water-white Italian keeps firm at from 34s. to 35s. per cwt., c.i.f. French medicinal in barrels is quoted 3½d. per lb., and first-pressing 3d., ex-wharf London. Cases are quoted 33s., c.i.f.

OIL, COD-LIVER.—Our Bergen correspondent writes on February 15 that the week has passed without any official information as to the catch of cod in the Lofoten district. The weather during the past few days has been stormy, and does not permit unrestricted fishing. The oil-market is consequently very firm at 71s. per barrel, f.o.b., for non-congealing oil (see our telegram). The exports from Bergen to date amount to 1014 barrels, against 849 barrels at the same period of last year. Reports received in London appear to confirm the statement that the fishing is very poor, and agents have raised their prices in most cases and now quote 80s. to 85s. per barrel, c.i.f. Newfoundland cod-liver oil is obtainable at 2s. 9d. per gal.

OIL, EUCALYPTUS, has been in good demand. B.P. quality is obtainable at from 1s. 1½d. to 1s. 2d. per lb., according to quantity. In auction, B.P. quality, containing 62 per cent. cineol, was held for 1s. 1d.

OIL, GERANIUM.—French is offered at 35s., Algerian at 18s. 6d., and Turkish 14s. 6d. per lb., net.

OIL, LAVENDER.—French of best quality is quoted 7s. to 7s. 6d. per lb., and Mont Blanc 5s. 6d. to 6s. Spike oil is obtainable at 2s. 5d. for finest.

OIL, OLIVE.—Mr. Consul Neville Rolfe, in reporting on the trade of South Italy for 1901, states that probably never before has the stock of olive oil in Italy been at such a low ebb. As long ago as last June it seemed doubtful whether there was oil enough on the market to fulfil the engagements entered into by merchants, and the future of the article seemed to depend entirely upon the new crop. In normal circumstances the fruiting of the trees would have led to a decline in prices for spring shipment, but the effect this year, after so many disappointments, was scarcely perceptible. The crop promised well, and did well. The fruit is well nourished and perfectly sound, especially in the

interior of the province of Bari, but more particularly so on the higher lands. Districts where the crop has been good will produce this season oils of such a high class as have not been placed on the market for many years past.

OIL PETITGRAIN is quoted 6s. 2d. per lb. for Paraguayan.

OPIUM.—The market remains easy, although holders of Persian are inclined to higher rates, quotations on the spot ranging from 8s. 6d. to 10s. per lb., according to quality. From Smyrna sales of about 200 cases are reported, principally for American account.

SMYRNA, February 7.—The sales this week amount to 33 cases, comprising 30 cases old and new choice talequale at 8s. 3d. to 8s. 4d. per lb., c.i.f., and 3 cases inspected Karahissar at 8s. 9d. No material decline is expected while there are buyers at these prices, but in any case the market is bound to go lower as Persian opium is offered, comparatively speaking, cheaper in London, both for spot and to arrive. News from the sources of production continues of a favourable character. The arrivals to date amount to 3,049 cases, against 3,032 cases at the same time last year.

CONSTANTINOPLE, February 14.—Continued fine weather is having effect in this country, and holders generally are showing some anxiety to unload. The Smyrna market has declined to 7s. 7d., at which considerable quantity has been taken by U.S. buyers. This market has likewise receded, and a speculator was able to buy 30 cases good quality at 7s. 8d. Beyond this, the only other sale was 6 cases Balukissar at 8s. 3d. The extraordinary mild weather has had the effect of overforcing all vegetation, and severe cold weather would have most disastrous results.

POPPY HEADS.—Belgian are very scarce, and 30s. per 1,000 is reported to have been paid for large sizes, and 35s. is now wanted. English are practically unobtainable.

QUININE.—The small bark shipments from Java for the first half of the month has induced a firmer feeling here, and at the end of last week March delivery sold at 1s. 1½d., and June at 1s. 1½d. Since then a small business has been done at 1s. 1½d. to 1s. 1¾d. for March and 1s. 2d. for June, but on Wednesday 1s. 1¾d. was accepted for the latter position. The market has been very quiet.

SAFFRON.—The market in Spain remains very firm, and holders here are not anxious sellers, looking for higher values later; 23s. to 24s. per lb. net will buy genuine Valencia.

SHELLAC.—The market closed dearer last week, and prices have advanced further since then. On the spot moderate sales have been made, including fair TN orange on a basis of 121s. to 122s. per cwt., cash terms. For February-April shipment several hundred cases have changed hands at 123s. to 124s., c.i.f. In the speculative market there was also a fair business early in the week at advancing prices, but the improvement has not been maintained, and the market closes dull and easier. The business done comprises March delivery at 123s. to 125s., April 126s., May 126s. to 127s., and June 126s. to 128s. per cwt.

SPICES have been very dull during the past week, and little business has been done. At the auctions on Wednesday nearly everything was bought in. Only one lot of Cochin *Ginger* sold, washed rough mouldy at 40s.; fair to good being bought in at 45s. to 50s. per cwt.; and B cut at 67s. 6d. Japan was taken out at 42s. per cwt. Zanzibar *Cloves* were bought in at 4d. per lb. for fair. The quotation for March-May delivery is 3½d.; and for June-August 3½d. per lb. A parcel of fine bright Penang sold at 10d. per lb. Good Amboyna mixed headless were held for 5½d. *Pimento* neglected, and nothing sold; 2½d. per lb. was the price asked. *Chillies* lower; fine Japan sold at 37s. to 38s. per cwt. A small lot of *Capsicums* sold, long red off stalk at 27s. per cwt., the remainder being bought in at 25s. for red mixed faded, and at 30s. for East India on stalk and for cherries. *Cassia lignea* was bought in at 45s. per cwt. for false packed, and at 48s. for good broken. *China-cinnamon* was bought in at 35s. per cwt. *Cinnamon* sold at 9d. per lb. for pieces, at 8d. for quillings, at 6d. for cuttings, at 6½d. for featherings, at 2½d. for small dusty chips, and at 1½d. for good bright bark. The usual quarterly sales will take place next Monday. *Pepper* is the turn easier; greyish to good Alleppy was bought in at 5½d. to 6d. per lb., Lampung at 6d., and Singapore at 6d.; but privately Singapore has been sold at 5½d. on the spot, and at the same price for March-May shipment. Singapore white was bought in at 10½d. for good fair, and Penang at 9½d., a bid of 9½d. being refused.

SYNTHETIC PERFUMES.—The following are some current quotations:—Geraniol, 1s. 2d. per oz., or 14s. per lb.; neroli, 3s. 9d. to 4s. 9d. per oz., and 55s. to 73s. per lb., according to quality; neroline, 15s. 6d. to 16s. per lb., and terpineol, 3s. 5d. per lb.

THYMOL.—The lowest spot price is now 7s. 9d. per lb., and business has been done at this figure.

London Drug-auctions.

At the auctions of drugs in first hands to-day a very dull tone prevailed, the chief interest being centred in asafetida, which sold at irregular rates. Buchu-leaves were easier; Sumatra benzoin was dearer, and cardamoms were irregular but lower. Jamaica honey was steady, but ipecacuanha of both descriptions was a shade easier. Rhubarb sold at valuations; grey Jamaica sarsaparilla declined slightly and both Jamaica and Madagascar beeswax were dearer. The following table shows the quantities of goods offered and sold, those marked with an asterisk denoting private sales:—

Offered		Sold		Offered		Sold	
Albumen	1	...	0	Musk (Cabardine) ..	1	...	10
Aloes—Cape.....	31	...	0	Myrrh	8	...	0
Socotrine	5	...	5	Oil—			
Ambergris.....	1	...	1	castor (E.I.)	60	...	0
Areca	18	...	12	cinnamon-leaf ...	15	...	0
Asafetida	809	...	453	croton	1	...	0
Balsam Tolu	10	...	10	eucalyptus	45	...	0
Benzoin—				gingelly	10	...	0
Palembang	107	...	0	wood	3	...	0
Siam	16	...	5	Opium	3	...	2
Sumatra	144	...	29	Orange-peel	20	...	2
Buchu	73	...	8	Quassia	5	...	0
Calumba	6	...	6	Rhubarb	30	...	12
Cardamoms	243	...	168	Sarsaparilla	114	...	43
Cascara sagrada ..	100	...	0	Seedlac	50	...	50
Cinchona	14	...	14	Senega	16	...	7*
Coca-leaves	5	...	5	Senna—			
Colocynth	6	...	0	Tinnevely.....	58	...	48
Croton-seed	35	...	0	Squills	10	...	0
Cubells	47	...	0	Tonka beans.....	1	...	1
Cumin-seed	30	...	0	Turmeric	138	...	20
Cuttlefish-bone ..	42	...	0	Wax (bees*)—			
Dragon's-blood.....	3	...	0	Australian	5	...	5
Elemi.....	20	...	5	East Indian	34	...	0
Gum acacia	95	...	0	Jamaica	5	...	5
chicle	10	...	0	Madagascar	72	...	72
sandarac	10	...	0	Morocco.....	32	...	0
tragacanth	12	...	*1	New Zealand	1	...	1
Honey—				Nyassaland	2	...	2
Jamaica.....	119	...	55	Spanish.....	39	...	0
Ipecacuanha—				Zanzibar	63	...	3
Cartagena.....	39	...	6				
Rio	31	...	5				

ALOES.—Socotrine, in kegs, sold at 72s. 6d. per cwt. for good, slightly softish. Cape was all bought in, 35s. being refused for fine bright hard, and 33s. for good ditto.

ARECA.—Sound Ceylon sold at 27s. per cwt.

ASAFETIDA.—Altogether some 809 packages (weighing about 40 tons) from the Persian Gulf were offered, and as importers were willing to meet the market, about half the quantity was disposed of at irregular but mostly lower prices. For fair to good pinky loose block from 57s. 6d. up to 80s. was paid, and greyish and brown block much mixed with stone from 40s. to 55s., and common stoney 20s. to 30s., and very low drossy 9s. to 10s. per cwt.

BALSAM TOLU.—Ten cases of large tins realised 1s. per lb., being unchanged.

BENZONIN.—Sumatra description sold at from 2s. 6d. to 5s. per cwt. above valuations, 9d. to 9d. 5s. being paid for 19 cases of fine seconds, well packed with small to bold almonds of storax flavour. This grade is exceptionally scarce, both here and in the United States. Fair seconds were about steady, 5 cases selling at 6d. 10s., and medium at 6d. Of Siam 16 cases were shown, of which 5 sold, comprising 1 case of very fine bold pale almonds of storax flavour, partly loose and in friable block, at 24d. per cwt.; 3 cases small to medium almonds at 15d. 10s. to 16d. 10s., and a case of dusty siftings, in hard block, at 60s. per cwt. Palembang gum was neglected.

BUCHU.—In large supply, and neglected. Eight bales of fair to good round greenish leaf sold at 7½d. per lb. A bid

of 6½d. is to be submitted for a pile of fair but very stinky leaves.

CALUMBA.—Five bags fair brownish to yellowish sorts with some small sold at 17s. 6d., and pickings 5s. per cwt. Privately, business has been done in washed and picked at 25s. per cwt.

CARDAMOMS sold at very irregular but generally lower prices. Seeds were firm to dearer. The following prices were paid:—Ceylon-Mysore, medium and bold pale round, 2s. 6d. to 3s.; bold medium pale, 2s. 3d. to 2s. 5d.; small and medium pale, 1s. 9d. to 2s.; small pale, 1s. 2d. to 1s. 6d.; bold splits, 1s. 6d. to 1s. 8d.; medium ditto 1s. 5d., and small 1s. 2d.; brown and split, 1s. 1d. Seeds, 1s. 6d. to 1s. 10d. Ceylon-Malabar, small and medium brown, 1s. 6d. to 1s. 7d.; very shelly, 10d.; darkish seed, 1s. 9d.; for bold palish 2s. 1d. was wanted.

CASCARA SAGRADA.—Fifty bags of good quill (1899 crop) were limited at 25s. 6d. per cwt.

COCA-LEAVES.—Five bags of common small brown Ceylon sold at 6d. per lb.

DRAGONS-BLOOD.—For 3 cases of partly reboiled, largely mixed with dull earthy lump, 9d. was refused.

ELEMI.—For fine pale gum a bid of 5l. 7s. 6d. was refused. From another catalogue 5 cases of fair palish sold at 95s.

HONEY.—Jamaica was the only description represented and values showed no change. Good set in cases fetched 22s., and for pale thick and brown set in barrels and cases 16s. to 18s. was paid.

IPECACUANHA.—The stocks in the warehouse consist of 525 packages Rio, and 443 packages Cartagena root. Privately, both descriptions have been very quiet during the past week. In auction-prices Rio was about 1d. easier, 10s. to 10s. 1d. per lb. being paid for fairly good bright, and 9s. 8d. to 9s. 10d. for sea-damaged. Cartagena was about steady, a few bags selling at 4s. 6d. per lb. for fairly clean and bold root. Several bids of 4s. 3d. per lb. were refused.

MYRRH.—For a case of pale picked gum 6d. was wanted, and siftings were held at 60s.

ORANGE PEEL.—The limit for fine bright thin Maltese strip was 8d. per lb.; 6d. was paid for one lot and sea-damaged sold at 2d.

RHUBARB sold at firm prices. Of a parcel of 10 cases High-dried 4 sold at 9d. per lb. for small to bold flat with three-quarter pinky fracture. Twenty cases Canton were put up and 8 sold, comprising a case of medium round with mostly pinky fracture, but slightly darkish at 1s. 9d.; 2 cases bold but slightly stinky trimming root, with three-quarter pinky and one quarter grey fracture at 2s. 5d.; 3 cases good flat and round pickings at 1s. 5d., and common pickings at 1s. per lb. Both Canton and Shensi are very scarce privately.

The exports from Shanghai from January 1 to December 31 have been (in piculs):—

	London	Germany	France	New York	Total
1901	636	1,493	74	502	2,705*
1900	1,575	1,305	21	1,357	4,258
1899	1,219	1,613	167	1,012	4,011
1898	2,792	1,892	111	1,198	5,993
1897	2,790	805	60	952	4,607
		Europe			
1896	933	1,004		367	2,304
1895	1,675	902		421	2,998
1891	2,304	623		165	3,092
1893	2,282	462		726	3,470

* In addition to above shipments in 1901 about 103 piculs have gone forward to Hong Kong, part of which may have been re-shipped to European and American ports.

SARSAPARILLA.—Grey Jamaica was represented by 81 bales, but no higher bid than 1s. 3d. was obtainable for sound. For slight country-damaged 1s. 1d. to 1s. 3d. was paid, and sea-damaged 11d. Sound Lima Jamaica sold at 1s. 3d. and damaged at 1s. 1d. to 1s. 2d. per lb. Bright red native Jamaica brought 9½d., and dull yellow 8½d.

SEEDLAC.—Fifty bags Madras sold at from 91s. to 97s. per cwt.

SENNA.—The meagre offerings of Tinnevely leaf were all of common quality, for which from $\frac{3}{4}$ d. up to $1\frac{1}{4}$ d. per lb. was paid. Pods were not offered.

SENEGA.—Nine bales were held at 2s. 3d. per lb., and 7 bags had been sold privately.

TONKA-BEANS.—A box of fair Para sold at 1s. 11d. per lb.

WAX, BEES'.—For the few packages of Jamaica offered there was keen competition, resulting in an advance of 5s. per cwt., from 8l. 5s. to 8l. 10s. being paid for good red and brown mixed. Madaga-car wax was 2s. 6d. dearer, fine brown block selling at 7l. per cwt., and fair pale yellow to dark brown 6l. 15s., with drossy and wormy block at 6l. 10s. to 6l. 12s. 6d. Two bags Nyasaland sell at 5l. 12s. 6d., and 5 bags good grey and yellow Australian realised 6l. 17s. 6d. per cwt.

The Salt-trade.

A correspondent of the *Liverpool Journal of Commerce*, in calling attention to the increased exports of salt last year (being 631,446 tons, as compared with 531,815 tons in 1900), says the coastwise trade of the year done by the salt shipping ports of the United Kingdom was 259,586 tons in 1901, against 289,085 tons in 1900, so that the actual increase for the year was not 99,631 tons, as shown by the Board of Trade returns, but 70,132 tons, the grand totals being: For 1901, 891,032 tons; for 1900, 820,900 tons. The returns show that Liverpool continues to hold the position of first salt-shipping port of the United Kingdom, nearly one-half of the entire salt-shippments of the kingdom. As regards markets for salt, the importance of studying the requirements of the East Indian trade, and of using every legitimate means of fostering trade with these markets, is evident when it is stated that practically the whole of the increase in the export salt-trade of the kingdom last year was due to the increased shipments to these markets; they are, in fact, the main support of the English salt-trade outside of the United Kingdom last year. The chance of British salt-makers securing a share of the American, Continental, and African trade appears to lie in their willingness to accept a fractional profit on salt sold on foreign account. Sales will have to be made on the narrowest margin of profit or not at all, unless they be made at a positive loss. Some recent business is said to have been done at a loss to prevent foreign competitors from obtaining orders, but such procedure cannot be commended.

Japanese Drug Market.

Yokohama, January 23.

The year opened with a quiet market, no important transactions having taken place. Values have a lower tendency.

In exports the new crop of dry ginger is now coming into the market and business has been done at the range of 12.50 yen to 12 yen per picul, chiefly for export to Europe. India is not a buyer now. The future of the market is towards lower rates, and 11 yen may buy early next month. Menthol crystals are firmly held, and holders generally ask 8 yen per catty without any important business. Dealers are now busy delivering their contracted cargoes. Peppermint oil is in light supply and price has advanced a little; sellers now quote 2.40 yen per catty. Aniseed can be had at 10.50 yen per picul. Camphor is unchanged, and present prices are 0.97 $\frac{1}{2}$ yen per lb. for 1-lb. tablets, and 1.03 yen per lb. for oz. tablets. Iodine is unchanged, but demand both at home and from abroad is rather brisk owing to comparatively low quotations. Copper sulphate is lower, and 14.25 yen per picul may buy. Oil of kuromoji is quoted 1.60 to 2 yen per catty, according to quality.

In import stuffs Cape aloes is higher in face of exceedingly light supply. Calumba is held at 10 yen per picul, while green Tinnevely senna is quoted 9 yen per picul. Saffron is steady at 18 yen per catty, without cheap sellers. Rio ipecacuanha is cheap at 7.50 yen per lb., while for powder 5.50 yen is asked. Condurango is very low, on account of arrivals, and holders are anxious sellers at 24 sen per lb. Senega is also low in price, owing to lack of demand; present quotation is 1.30 yen per lb. Ergot is cheap, on account of arrivals of some 25 cwt.; present quotation is 1.05 yen per lb. Carbolic acid is cheap, in anticipation of arrivals of cargoes; 37 $\frac{1}{2}$ sen per lb. will buy. Cocaine is somewhat lower, and 11 yen per oz. is generally asked, which figure may cut to some extent. Caffeine is cheap at 5 $\frac{1}{2}$ sen per oz.-bottles. Copaiba is firm at 0.85 yen per lb., while for Peru balsam 2.90 yen per lb. is asked without buyers. Borax is low at 11.70 yen per picul. Bismuth sublimite is quoted 2.60 yen per lb. Stocks are heavy. Glycerin is low at 31 sen per lb., with buyers at 30 sen. Quinine is slow of sale, holders asking 57 to 53 sen per oz., in 100 oz. tins. Sulphonal is cheap, on account of lower advice from Europe, and holders now ask 3 yen per lb., with still lower tendency. Thymol is lower, owing to lack of demand. Santonin is firmly held at 9 yen per lb.

Coming Events.

Notices of forthcoming meetings are inserted in this section free of charge. Secretaries should send such notices to the Editor of "The Chemist and Druggist," 42 Cannon Street, London, E.C., so that they may be received not later than Wednesday of the week of publication; if later, by telegram to "Chemicus London."

Friday, February 21.

Hastings and St Leonards Pharmaceutical Association, Castle Hotel. General meeting. Mr. W. S. Glyn-Jones will give an address.

Tuesday, February 25.

Bradford Chemists' Association. Mr. J. Harrison (Sunderland) will give an address on "Pharmacy."

Wednesday, February 26.

Huddersfield Chemists' Association, Queen's Hotel, Huddersfield, at 6 P.M. Inaugural dinner. Tickets can be had from Mr. R. C. Walsham, 4 Market Place, Huddersfield.

Chemists' Managers' and Assistants' Society, Horseshoe Hotel, Tottenham Court Road, W., at 8 P.M. Paper by Mr. R. E. Wright on the "General Positions of Chemists' Managers and Assistants."

Thursday, February 27.

Reading Chemists' Association. Mr. F. E. A. Tunbridge will read a paper on "The Chemist as a Mechanic."

Chemists' and Druggists' Society (Ireland), Whitehall Buildings, Union Street, Belfast, at 7.30 P.M. Annual social re-union. Tickets, 1s. each, can be had from the Secretary, Mr. W. J. Rankin, 10 Garfield Chambers, Royal Avenue, Belfast.

Optical Society, 7 Crane Court, Fleet Street, E.C. at 8 P.M. Annual meeting.

Chemists' Assistants' Association, 73 Newman Street, W., at 9 P.M. Discussion on "The Best Systematic Methods for the Pharmacist."

North-East Lancashire Chemists' Association, White Bull Hotel, Blackburn, at 6.45 P.M. Annual dinner. The President and Vice-President of the Pharmaceutical Society of Great Britain will be present. Tickets, 3s. 6d. each, can be had from Mr. G. B. Pickworth, 72 Victoria Street, Blackburn.

Barnsley Chemists' Association, Royal Hotel, Barnsley, at 6.30 P.M. Discussion on "The Social Status of the Chemist."

Friday, February 28

Royal Institution of Great Britain, Albemarle Street, Piccadilly, W., at 9 P.M. Professor H. A. Miers on "Gold-mining in Klondyke."

THE dinner of past and present students of the West of Scotland College of Pharmacy, 157 St. Vincent Street, Glasgow, will be held in the Alexandra Hotel, Bath Street, on March 10, at 9 P.M. Tickets 3s. each, may be had at the College.

SCHOOL OF PHARMACY STUDENTS' ASSOCIATION.—There will be a social evening meeting on Wednesday, March 5, in the lecture theatre at 17 Bloomsbury Square (by permission of the Pharmaceutical Society), when Professor J. Norman Collie, F.R.S., will give an address on "The Lofoden Islands," illustrated with lantern-slides. The chair will be taken by Professor Green, F.R.S., D.Sc., at 8 P.M. Early application for visitors' tickets, which will be issued free of charge, should be made to the Hon. Secretaries of the Students' Association, 17 Bloomsbury Square, W.C.

A LATE POST on press day brought us a *Glasgow Evening Times*, containing an article on the grievances of chemists' assistants and a report of a visit paid by the students of the West of Scotland College of Pharmacy to the People's Palace in Glasgow and an inspection of the exhibits.

SULPHONAL-POISONING.—At an inquest held at Bournemouth on February 18, on the death of a doctor's wife who was suffering from melancholia, it transpired that deceased was in the habit of taking sulphonal-tablets for insomnia. The doctor who was called in surmised that deceased had taken eighty of the tablets at one dose, and attributed death to sulphonal-poisoning. The Coroner (Dr. A. Kinscy Morgan) thought it a great pity that there should be freedom of access for self-treatment by such a drug, and doubtless the occurrence would be a lesson to all those who regarded sulphonal as a harmless remedy. There was no blame attached to the chemist who supplied the tablets, and if there was any fault it lay with the Pharmaceutical Society, who might now think it necessary to get sulphonal (and some other remedies that were on the market) put on the poisons schedule.